

*JAX<sup>®</sup> Mice,  
Clinical & Research Services*

# CATALOG

*June 2015 — May 2016*

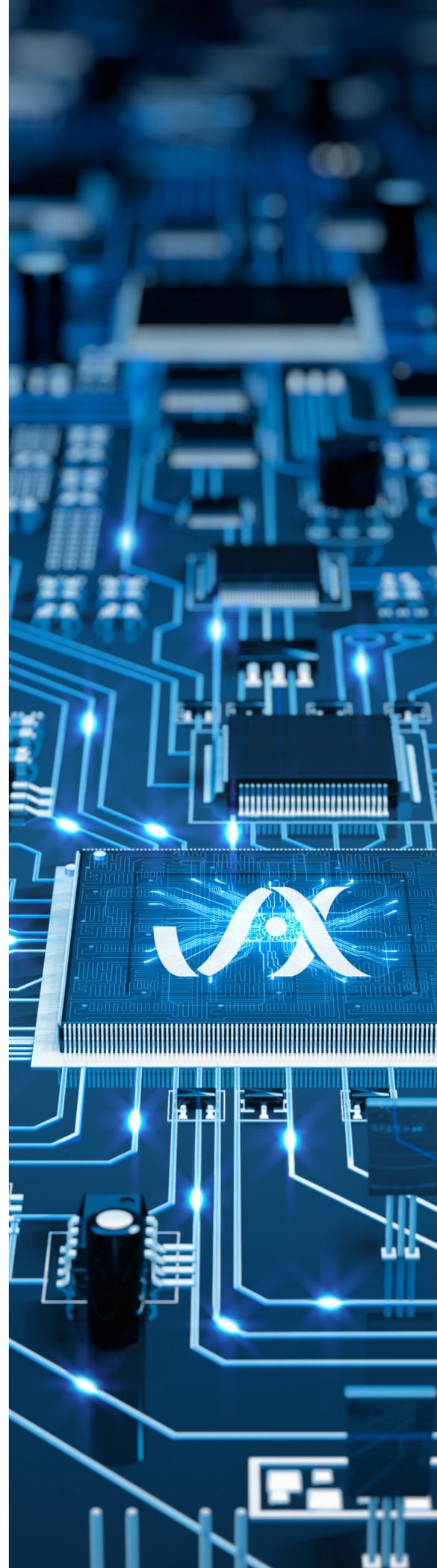


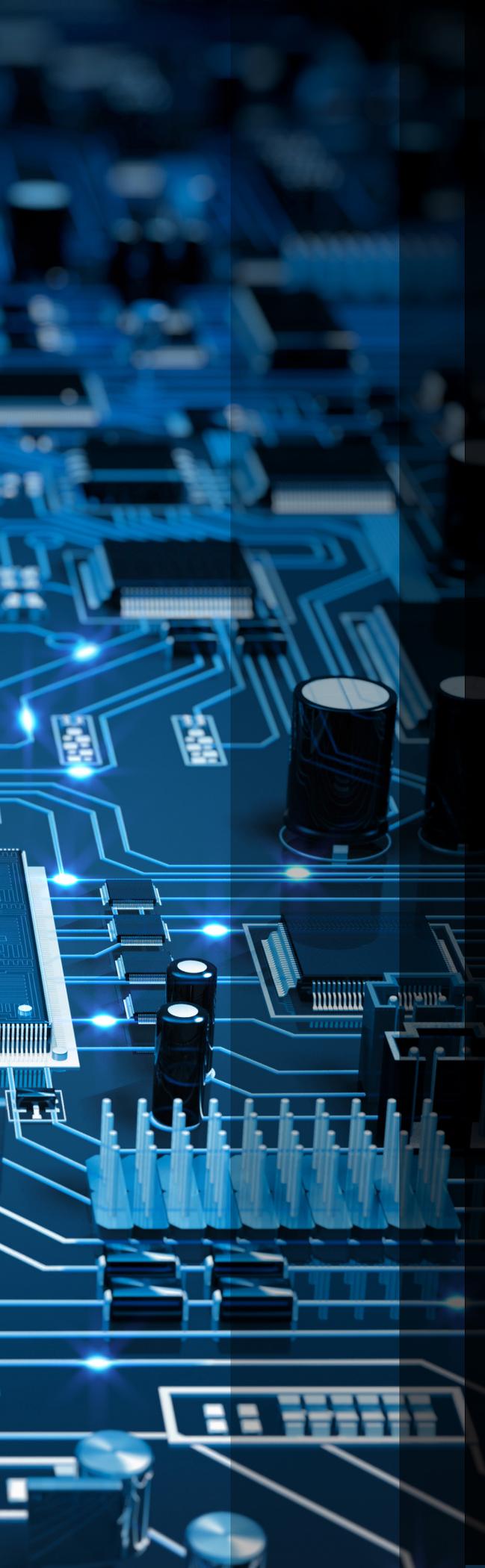
**The Jackson  
Laboratory**

*Leading the search  
for tomorrow's cures*

# YOUR RELIABLE SOURCE OF PDX MICE

JAX has more than 300 unique patient-derived xenograft (PDX) oncology models from treatment naive and resistant patients established in the highly immunodeficient NSG™ mouse strain. JAX PDX models are available at earlier passage numbers than any other PDX collection available today, allowing more accurate recapitulation of primary human tumor biology.





# PDX LIVE™ MICE DATA. FASTER.

GET EXPERIMENTAL DATA UP TO 80%  
FASTER WITH PDX LIVE™ TUMORS.

To streamline the execution of your PDX cancer studies, JAX offers a collection of PDX Live™ tumor engrafted NSG™ mice ready for immediate enrollment in preclinical efficacy studies at our facility or shipment to yours. This valuable off-the-shelf resource can save your project more than 6-12 weeks, the time it takes to engraft and expand tumors out of the freezer.



# ***HUMANIZED NSG™ MODELS***

## PLATFORMS FOR IMMUNO-ONCOLOGY

Humanized NSG™ (hu-NSG™) mice represent an innovative and cost-effective immuno-oncology platform to simulate trials, evaluate multiple drugs alone or in combination, and produce predictive data.

### **hu-PBMC**

Created with adult peripheral blood mononuclear cells, engrafting quickly and enabling short-term studies requiring mature human T cells.

### **hu-CD34**

Produced by injecting CD34<sup>+</sup> cells from fetal liver, these models yield robust multilineage immune systems with good T cell maturation and function for long-term studies.

### **hu-BLT**

Transplanted with CD34<sup>+</sup> cells and fetal liver and thymus fragments, these models generate a well-developed adaptive immune system with highly functional T cells and B cells with improved class switching and robust IgG production.

# *Start your research sooner!*

Study ready hu-NSG™ cohorts are available for immediate shipment.

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# Model portfolios

By integrating research data from multiple mouse models, each with relevance to differing components of the human condition, you can develop a more complete understanding of biology, disease causation, and potential treatment strategies.

This catalog section pulls together models and research tools for quick and easy reference. We have included data to help you understand the key differences between the models in each portfolio. Use it to identify both existing and new models for the work you have planned in the coming year.

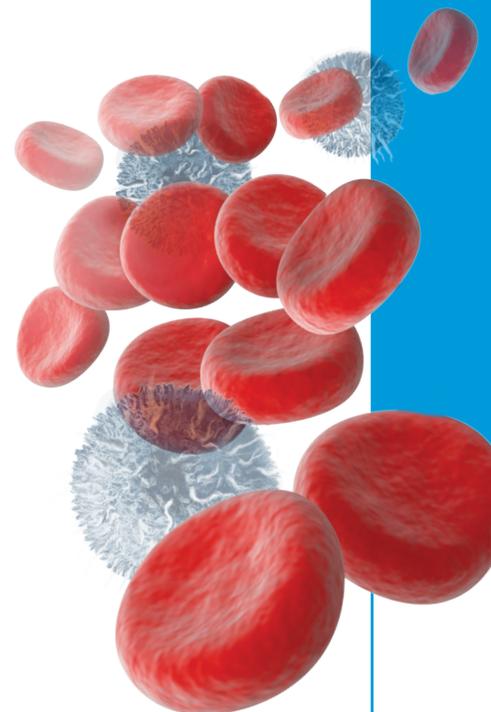
This section includes portfolios focused around Cancer Transplantation (Immunodeficient Mice), Metabolic Research, and C57BL/6 Strains & Resources. There is also expanded information about NSG™ mice and Lupus models.



**Cancer Transplantation  
(Immunodeficient)  
portfolio**  
page 2-3



**Metabolic portfolio**  
page 4-5



**C57BL/6 Strains  
& Resources portfolio**  
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**NSG™ portfolio**  
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# Cancer Transplantation (Immunodeficient) portfolio



## Major Phenotypes

**NOD.Cg-Prkdc<sup>scid</sup> Il2rg<sup>tm1Wjl</sup>/SzJ**  
(005557, see pages 15-16)

**NOD.CB17-Prkdc<sup>scid</sup>/J**  
(001303, see page 17)

Common Names	NSG™	NOD <i>scid</i>
Mature B cells	Absent	Absent
Mature T cells	Absent	Absent
Dendritic cells	Defective	Defective
Macrophages	Defective	Defective
Natural killer cells	Absent	Defective
Hemolytic complement	Absent	Absent
Leakiness	Very Low	Very Low
Irradiation tolerance	Low	Low
Lymphoma incidence	Low	High (thymic lymphoma)
Benefits	<ul style="list-style-type: none"> <li>• Engrafts the widest range of solid &amp; hematological cancers, including ALL &amp; AML</li> <li>• Most sensitive host for cancer stem cells when compared to NOD <i>scid</i> or nude mice</li> <li>• Longer lifespan than NOD <i>scid</i>; supports long-term engraftment studies &amp; capabilities; &gt;89 weeks median survival</li> </ul>	<ul style="list-style-type: none"> <li>• Higher take-rates for slow-growing cancer cell lines than BALB <i>scid</i> or nude xenograft models</li> <li>• Xenotransplantation of some solid human tumors</li> <li>• Adoptive transfer from strains on NOD background enables study of cell function &amp; track cell movement</li> <li>• About 36 weeks median survival</li> </ul>
Considerations	<ul style="list-style-type: none"> <li>• No thymic lymphomas, can be used for long &amp; short-term experiments</li> <li>• Sensitive to irradiation</li> </ul>	<ul style="list-style-type: none"> <li>• Develops thymic lymphomas by 8-9 months, best used in short-term experiments</li> <li>• Sensitive to irradiation</li> </ul>
References	<p>Ishikawa et al. 2005 (PMID: 15920010) Shultz et al. 2005 (PMID: 15879151)</p>	<p>Shultz et al. 1995 (PMID: 7995938)</p>

NSG™: A ground-breaking tool for translational research



**CBySmn.CB17-  
Prkdc<sup>scid</sup>/J**  
(001803, see page 18)

**B6.129S7 Rag1<sup>tm1Mom</sup>/J**  
(002216, see page 19)

**J:NU**  
(007850, see page 20)

**NU/J**  
(002019, see page 21)

BALB <i>scid</i>	B6 <i>Rag1</i>	Outbred Nude	Inbred Nude
Absent	Absent	Present	Present
Absent	Absent	Absent	Absent
Present	Present	Present	Present
Present	Present	Present	Present
Present	Present	Present	Present
Present	Present	Present	Present
Very Low	Absent	N/A	N/A
Low	High	High	High
High (thymic lymphoma)	Low	Low	Low
<ul style="list-style-type: none"> <li>Allows allogeneic and xenogeneic cancer cell lines &amp; tissues</li> <li>Engrafts hematopoietic cancer cell lines, some primary cells</li> <li>Improvements in engraftment efficiency over nude models for some cancer cell lines</li> </ul>	<ul style="list-style-type: none"> <li>Radiation resistant, providing an alternative to <i>scid</i> mutants</li> <li>Adoptive transfer from strains on B6 background permits to study cell function and track cell movement</li> </ul>	<ul style="list-style-type: none"> <li>Engraftment of human &amp; mouse tumor cell lines</li> <li>Easy assessment of subcutaneous tumor growth due to lack of fur</li> <li>Segregating genetic background improves animal vigor</li> </ul>	<ul style="list-style-type: none"> <li>Engraftment of human &amp; mouse tumor cell lines</li> <li>Easy assessment of subcutaneous tumor growth due to lack of fur</li> <li>Improved experimental reproducibility due to genetic homogeneity</li> </ul>
<ul style="list-style-type: none"> <li>Innate immunity intact</li> <li>NK cell activity limits engraftment</li> <li>Sensitive to irradiation</li> </ul>	<ul style="list-style-type: none"> <li>Innate immunity intact</li> <li>Poor host for primary cell transplantation</li> </ul>	<ul style="list-style-type: none"> <li>Innate immunity intact</li> <li>Little engraftment of hematopoietic cancer cells</li> <li>Not suitable for primary cell transplantation</li> </ul>	<ul style="list-style-type: none"> <li>Innate immunity intact</li> <li>Little engraftment of hematopoietic cancer cells</li> <li>Not suitable for primary cell transplantation</li> </ul>
Nonoyama et al. 1993 (PMID: 8473734)	Mombaerts et al. 1992 (PMID: 1547488)		Kelland LR. 2004 (PMID: 15120038)



# Metabolic portfolio



## Diabetes Phenotypes

### Humans

**B6.Cg-*Lep<sup>ob</sup>*/J**  
(000632, see page 57)

**B6.BKS(D)-*Lepr<sup>db</sup>*/J**  
(000697, see page 58)

Induced or spontaneous	Spontaneous	Spontaneous
Genetics	Polygenic	Polygenic
Onset	Mature (progressive)	Young
Sex	M, F	M, F
Hyperinsulinemia	Moderate	Severe
Glucose intolerance	Yes	Yes
Hyperglycemia	Yes	Moderate (transient)
Islet atrophy	Variable	No (hyperplasia only)
Impaired wound healing	Yes	Yes
Nephropathy	Yes	No

## Obesity Phenotypes

### Humans

**B6.Cg-*Lep<sup>ob</sup>*/J**  
(000632)

**B6.BKS(D)-*Lepr<sup>db</sup>*/J**  
(000697)

Induced or spontaneous	Spontaneous	Spontaneous
Genetics	Polygenic	Monogenic
Onset	Variable	Young
Sex	M, F	M, F
Degree	Moderate	Severe
Hypertriglyceridemia	Yes	Yes
Leptin/leptin receptor axis	Normal	Disrupted
Hyperphagia	No	Yes
Hypercorticism	No	Yes
Thermoregulatory defects	No	Yes
Liver steatosis	Variable	Severe



**BKS.Cg-Dock7<sup>m</sup> +/+  
Lepr<sup>db</sup>/J**  
(000642, see pages 59-60)

**C57BL/6J DIO**  
(000664, see pages 30-31)

**NONcNZO10/LtJ**  
(004456, see page 40)

**TALLYHO/JngJ**  
(005314, see page 42)

Spontaneous	Diet-induced	Diet-induced	Diet-induced
Polygenic	Polygenic	Polygenic	Polygenic
Young	Mature	Mature	Mature
M, F	M	M	M
Moderate (transient)	Mild	Moderate	Yes
Yes	Yes	Yes	Yes
Severe	Mild / Moderate	Moderate / Severe	Yes
Yes	No	Variable	Yes (late onset)
Yes	Yes	Yes	Unknown
Yes (mild)	No	Yes (mild)	Unknown

**BKS.Cg-Dock7<sup>m</sup> +/+  
Lepr<sup>db</sup>/J**  
(000642)

**C57BL/6J DIO**  
(000664)

**NONcNZO10/LtJ**  
(004456)

**TALLYHO/JngJ**  
(005314)

Spontaneous	Diet- induced	Diet- induced	Spontaneous
Monogenic	Polygenic	Polygenic	Polygenic
Young	Mature	Mature	Juvenile
M, F	M	M, F	M, F
Severe	Severe	Moderate	Moderate
Yes	Mild	Yes (Males only)	Yes
Disrupted	Normal	Normal	Normal
Yes	Mild	No	No
Yes	No	No	Unknown
Yes	Unknown	No	No
Severe	Unknown	Moderate	Moderate



# C57BL/6 Strains & Resources portfolio

## B6J or B6NJ: We've Got You Covered

All C57BL/6 mice are not created equal. Although they share a common origin, the C57BL/6J and C57BL/6N substrains were separated in 1951. Altogether, over 200 generations of breeding have elapsed since then, resulting in the accumulation of spontaneous mutations through natural genetic drift. For this reason, C57BL/6J and C57BL/6N are genetically and phenotypically unique in many ways. For example, C57BL/6N substrains harbor the *Crb1<sup>rd8</sup>* retinal degeneration mutation.

The JAX® Mice collection contains the most comprehensive set of C57BL/6 resources available, including:

- C57BL/6J (000664), the most widely published inbred mouse strain in existence.
- C57BL/6NJ (005304), a substrain of C57BL/6N developed at NIH and imported back to The Jackson Laboratory.
- B6(Cg)-Tyr<sup>2j</sup>/J (000058), an albino C57BL/6J congenic strain.

All three strains are readily available from the highest health status, opportunistic pathogen free rooms in our Bar Harbor, Maine and Sacramento, Calif., breeding facilities.



### C57BL/6J (000664, see pages 30-31)

- The most thoroughly characterized inbred mouse strain, with over 11,000 PubMed references.
- The first inbred strain to be sequenced and the reference for all other mouse genomes ([ensembl.org](http://ensembl.org)).
- Protected from genetic drift by the exclusive JAX® Genetic Stability Program ([jaxmice.jax.org/genetichealth/stability](http://jaxmice.jax.org/genetichealth/stability)).
- Over 3000 phenotypes cataloged in the Mouse Phenome Database ([phenome.jax.org](http://phenome.jax.org)).
- Morula stage embryos available for ES cell microinjection ([jaxmice.jax.org/cells/morula](http://jaxmice.jax.org/cells/morula)).
- Timed pregnant mice available ([jaxmice.jax.org/preconditioned/timedpregnant](http://jaxmice.jax.org/preconditioned/timedpregnant)).
- Available on a high fat diet; response is more robust than C57BL/6NJ ([jaxmice.jax.org/diomice](http://jaxmice.jax.org/diomice)).
- Availability of a single nucleotide polymorphism panel between C57BL/6J and C57BL/6NJ ([jaxservices.jax.org/genome/scanning](http://jaxservices.jax.org/genome/scanning)).



**C57BL/6NJ**  
(005304, see page 32)

- “B6N” substrain derived from the NIH colony of C57BL/6 mice created in 1951.
- Control strain for B6N mice, including mice from the Knockout Mouse Project (KOMP).
- Protected from genetic drift by the exclusive JAX® Genetic Stability Program ([jaxmice.jax.org/genetichealth/stability](http://jaxmice.jax.org/genetichealth/stability)).
- Genome sequence available ([sanger.ac.uk/resources/mouse/genomes](http://sanger.ac.uk/resources/mouse/genomes)).
- mES cells are available for gene targeting ([jaxmice.jax.org/cells/escells](http://jaxmice.jax.org/cells/escells)).
- Morula stage embryos are available for blastocyst injection ([jaxmice.jax.org/cells/morula](http://jaxmice.jax.org/cells/morula)).
- Availability of a single nucleotide polymorphism panel between C57BL/6J and C57BL/6NJ ([jaxservices.jax.org/genome/scanning](http://jaxservices.jax.org/genome/scanning)).



**B6(Cg)-Tyr<sup>c-2J</sup>/J**  
(000058, see page 68)

- Albino C57BL/6J congenic strain.
- Ideal blastocyst host for targeted C57BL/6 ES cells.
- mES cells are available for gene targeting ([jaxmice.jax.org/cells/escells](http://jaxmice.jax.org/cells/escells)).
- Morula stage embryos are available for blastocyst injection ([jaxmice.jax.org/cells/morula](http://jaxmice.jax.org/cells/morula)).

**The JAX Toolkit for C57BL/6 includes:**

- C57BL/6J (000664), C57BL/6NJ (005304) and B6(Cg)-Tyr<sup>c-2J</sup>/J (000058).
- Genome sequences ([jaxservices.jax.org/genome/scanning](http://jaxservices.jax.org/genome/scanning)).
- mES cells ([jaxmice.jax.org/cells](http://jaxmice.jax.org/cells)).
- Morula stage embryos ([jaxmice.jax.org/cells/morula](http://jaxmice.jax.org/cells/morula)) SNP data ([phenome.jax.org](http://phenome.jax.org)).
- Comprehensive phenotype information ([phenome.jax.org](http://phenome.jax.org)).
- Availability in large quantities from highest health status Specified and Opportunistic Pathogen Free (SOPF) rooms.
- Timed pregnant mice ([jaxmice.jax.org/preconditioned/timedpregnant](http://jaxmice.jax.org/preconditioned/timedpregnant)).
- Diet-Induced Obesity mice on high fat diet ([jaxmice.jax.org/diomice](http://jaxmice.jax.org/diomice)).
- Availability of SNPs to distinguish between B6 substrains ([phenome.jax.org](http://phenome.jax.org)).



CUTTING-EDGE

# DISEASE MODELING

## *An Expanding Collection*

Since 2005, the NOD scid gamma (NSG™) mouse has been the premiere and most-utilized highly-immunodeficient platform for exquisite cell and tissue transplantation studies. Our rapidly expanding JAX NSG™ portfolio currently consists of more than 22 NSG™-based disease and research models with targeted genetic and cellular manipulations of the mouse for enhanced ability to interrogate specific functions of cells *in vivo*.

## *Precise Control*

Next generation NSG™-based strains have enabled the establishment of a human immune system with enhanced functionality that generates more robust primary and secondary immune responses. These models have superior:

- T cell-dependent immune responses
- B cell-dependent responses.
- Antibody production.
- Enhanced myeloid engraftment.
- Allograft rejection.

## RESEARCH AREAS

- Oncology.
- Infectious disease and immunity.
- Inflammation.
- Diabetes.
- Stem-cell biology.
- Transplantation & GvHD research.

## APPLICATIONS

- Transplantation and growth of specialized tissues and cells: myeloid-derived tissues and cancers (AML, CML), primary cells, stem cells.
- Efficacy evaluation of therapeutic candidates, immune checkpoint modulators, cancer vaccines and oncolytic immunotherapies, anti-virals, and vaccines.
- Radiation-based treatment protocols.
- Benchmarking novel therapies against current SOC drugs.
- Basic research into physiology and disease etiology.

# NSG™

## NOD *scid* gamma

The most versatile immunodeficient strain enable research advances that were not previously possible. This model engrafts the widest range of human cells and tissue, making it the strain of choice for cancer xenograft modeling and studies in immuno-oncology, stem cell biology, and efficacy testing.



## NOD.Cg-Prkdc<sup>scid</sup> Il2rg<sup>tm1Wjl</sup>/SzJ (005557)

Profound deficits in innate and adaptive immunity.

Lacks mature T cells, B cells, hemolytic complement and NK cells. It is also deficient in cytokine signaling and has defective dendritic cells and macrophages.

Most permissive host for cancer and stem cells.

The most permissive platform for quantifying and characterizing normal, cancerous, and hematological cancer stem cells.

Long lifespan and greater retention of tumor morphology.

NSG™ mice offer improved preservation of patient-derived tumor morphology and cellular heterogeneity. Long lifespan relative to NOD *scid* mice, NSG™ mice readily support long-term engraftment studies and capabilities, allowing the most complex and innovative modeling.

# Lupus portfolio

## Versatile tools to accelerate the development of effective autoimmune treatments

The JAX® Mice collection contains the two most commonly used models of autoimmune systemic lupus erythematosus (SLE): the NZBWF1/J hybrid and the MRL-*Fas*<sup>lpr</sup>/J strain. Both models are well-characterized and highly useful for interrogating clinically-relevant features of disease.

- High levels of circulating immunoglobulins.
- Elevated anti-nuclear antibodies.
- Proteinuria.
- Development of immune complex mediated glomerulonephritis.
- Splenomegaly.
- Lymphadenopathy.



Phenotypic options between these *gold standard* models allow selection of the mouse demonstrating unique biological features most appropriate for your research program.

### NZBWF1/J (100008, see page (-))

An F1 hybrid of the NZB and NZW inbred strains, these mice are a valued platform for elucidating complex immunobiological responses and investigating the genetic basis for the complex multifactorial disease. Mice demonstrate the female bias, similar to the human condition. Delayed onset and progressive development of the disease more accurately recapitulate human clinical presentation.

### Preclinical testing

As not all phenotypic characteristics of human disease overlap, predictability of test compounds can be improved when using multiple models (see Perry et al., 2011. *J Biomed Biotechnol*). JAX® *In Vivo* Pharmacology Services (pages 85-87) has years of experience providing preclinical efficacy testing services using both lupus models.



### MRL/MpJ-*Fas*<sup>lpr</sup>/J (000485, see page 5)

These mice have emerged as one of the most powerful models of systemic autoimmunity and display unique phenotypes - antibodies against RNA-containing complexes and skin lesions. Earlier phenotypic onset offers advantages in experimental timelines not observed in other models.

The complete and comprehensive JAX® Mice lupus collection can be found at: [jaxmice.jax.org/list/ra1743](http://jaxmice.jax.org/list/ra1743).

## Comparison of Lupus Models

	NZBWF1/J (100008)	MRL/MpJ- <i>Fas</i> <sup>lpr</sup> /J (000485)
50% Mortality (months) Female	7-8	5
50% Mortality (months) Males	13-15	5
Antinuclear Antibodies	Yes*	Yes
Skin lesions	No	Yes
Glomerulonephritis	Yes	Yes
Lymphadenopathy	Yes	Yes
Splenomegaly	Yes	Yes
Arthritis	No	Yes
Breeding Performance	Fair	Fair

## JAX<sup>®</sup> Mice: The *Gold Standard* for Biomedical Research

The Jackson Laboratory, a non-profit research institute, provides over 8,000 strains of laboratory mice, including both the most commonly used laboratory strains and unique specialty strains. All JAX<sup>®</sup> Mice are maintained to ensure the highest quality resources. The JAX<sup>®</sup> Mice collection includes:

### Unsurpassed Selection

- More than 8,000 of the most common and unique strains available.
- Over 1,800 strains are maintained live to provide easy access and accelerate your project timelines.
- More than 500 new strains are added to our collection every year from the research community.
- Extensive selection of Cre-lox strains, rare disease models, and more are available.

### Extensive Characterization

You use well-characterized reagents—use well-characterized mice. Accept nothing less than JAX<sup>®</sup> Mice, the most published and well-characterized models available, including an unsurpassed archive of historical and cutting-edge publications. Scientific data resources accessible through The Jackson Laboratory's website include:

- The **Mouse Phenome Database** ([jax.org/phenome](http://jax.org/phenome)) – extensive phenotype data for more than 700 strains, with thousands of measurements for each of the most commonly used JAX<sup>®</sup> Mice inbred strains. This extensive data collection was developed to help researchers:
  - Reduce mouse use by minimizing the need for strain characterization studies.
  - Select the most relevant inbred strain or background for new or existing mutations.
  - Compare your data using detailed project protocols.
  - Discover new genotype to phenotype correlations.

- **JAX<sup>®</sup> Mice Database** ([jaxmice.jax.org/query](http://jaxmice.jax.org/query)) – detailed information for every strain with extensive in-house data, references and links to key data resources.
- **Mouse Genome Informatics** ([informatics.jax.org](http://informatics.jax.org)) – integrated genetic, genomic and biological data to facilitate the study of human health and disease.
- **Mouse Tumor Biology Database** ([tumor.informatics.jax.org](http://tumor.informatics.jax.org)) – primary research data on the pathobiology of cancer in mice.

### Superior Animal Health

In addition to an unwavering commitment to rigorous health monitoring for all JAX<sup>®</sup> Mice strains, superior health options are available for the most popular JAX<sup>®</sup> Mice strains. For the more than 20 most commonly used research strains, mice are available at multiple health standards including our highest health standard that excludes common opportunistic pathogens, such as *Klebsiella spp.* and *Staphylococcus aureus*.

### Unsurpassed Education and Support

Get the help you need with our education and support resources.

- **Webinars** ([jaxmice.jax.org/webinar](http://jaxmice.jax.org/webinar)) – discussions of disease models, research tools and resources, colony management techniques and more.
- **Technical Support Online Self-help** ([jaxmice.jax.org/support/techsupport-index.html](http://jaxmice.jax.org/support/techsupport-index.html)) – a broad collection of genotyping, mouse husbandry and nomenclature, mouse strain data and other resources.
- **Technical Information Services** – a team of Ph.D. trained scientists available to support your selection and use of JAX<sup>®</sup> Mice & Services. Visit [jaxmice.jax.org/support/techsupport-index.html](http://jaxmice.jax.org/support/techsupport-index.html) for more information.
- **Courses and Conferences** ([jax.org/courseseducation](http://jax.org/courseseducation)) – world-class scientific courses, seminars, training and workshops.

More than 26 Nobel Prize winning discoveries have been made possible by using JAX<sup>®</sup> Mice or directly leveraging research techniques developed at The Jackson Laboratory. Visit [jax.org/milestones/nobels](http://jax.org/milestones/nobels) for more on these exciting achievements.

For pricing on all JAX<sup>®</sup> Mice Strains, download the pdf version of the 2015-2016 JAX<sup>®</sup> Mice Price List at: [jaxmice.jax.org/literature/catalog](http://jaxmice.jax.org/literature/catalog)

# Ordering Information

## Ordering Information for JAX® Mice

To place orders or to inquire about pricing, order status, or strain availability:

Tel: 1-800-422-6423  
(from U.S.A., Canada & Puerto Rico only)  
1-207-288-5845 (from any location)

Email: [orderquest@jax.org](mailto:orderquest@jax.org)

Online: [jaxmice.jax.org/orders](http://jaxmice.jax.org/orders)

Mail: The Jackson Laboratory  
Customer Service  
610 Main Street  
Bar Harbor, ME 04609-1526 U.S.A.

To expedite order processing, please provide the following information with your order:

- Account number.
- Institution name.
- Billing address.
- Shipping address.
- Name and contact information (email and telephone) of researcher using the mice.
- Name and contact information (email and telephone) of veterinarian or facility manager to receive animal health communications.
- Order type (one time order or standing order)
- Purchase order number (and release number if applicable).
- Strain information, including stock number, strain name, genotype, gender, age, quantity desired.
- Preferred delivery dates.
- Animal health requirements .

## JAX® Mice International Distributors

Researchers around the world may continue to order JAX® Mice strains directly from The Jackson Laboratory or through our authorized distributors. To view a list of distributors, visit our website at [jaxmice.jax.org/orders/distributors](http://jaxmice.jax.org/orders/distributors).

## Charles River supplies JAX® Mice strains to many European and Asian countries

The Jackson Laboratory and Charles River have a cooperative agreement to provide JAX® Mice strains and research services using JAX® Mice to biomedical

researchers in many European and Asian countries. Through this agreement, Charles River also serves as our exclusive commercial breeder of many popular JAX® Mice strains with breeding sites in France, Germany, Italy, Japan, and the United Kingdom.

*Only JAX® Mice strains bred by Charles River are equivalent in genetic quality to those bred by The Jackson Laboratory.*

## Volume Pricing Program

Ordering large quantities of C57BL/6J, BALB/cJ, or other *gold standard* JAX® Mice for your research? Take advantage of special volume pricing and accelerate your research today! Volume pricing is available for twenty of the most commonly used research strains.

Visit our website at [jaxmice.jax.org/findmice/volume](http://jaxmice.jax.org/findmice/volume) for full program details.

## Dedicated Ground Transportation throughout U.S. & Canada

JAX® Mice are shipped via our dedicated ground transportation network to over 99% of the U.S.A. and most of Canada. Specially constructed trucks engineered with environmental control systems that facilitate sanitation and air flow ensure a low-stress, clean, comfortable, and safe ride. The environmental control systems alert drivers and JAX personnel of deviations, incorporate multiple backup features, and carry maintenance support guarantees for all points en route. Highly skilled drivers understand the needs of JAX® Mice and of our customers.

For shipment, mice are packed within the isolators and barrier facilities in which they are raised. They are shipped in our state-of-the-art autoclaved and sterilized shipping containers, and are supplied with fresh bedding, gelatinized water packets, and the same feed that they eat. Mice shipped by this method arrive at the same high health status in which they were produced. If ground transportation is not available to your location, air shipment can be arranged.

For detailed information on our shipping routes, visit [jaxmice.jax.org/orders/shippinginfo](http://jaxmice.jax.org/orders/shippinginfo).

Our knowledgeable Customer Service and Technical Support teams provide comprehensive solutions and support to advance your research. Our Regional Representatives are also available for onsite discussions at your institution.

## Contact Information

### Hours

8:00 a.m. to 8:00 p.m. (Eastern Time)

5:00 a.m. to 5:00 p.m. (Pacific Time)

Monday through Friday

### Customer Service

To place an order or inquire about prices or availability:

Tel: 1-800-422-6423 (*from U.S.A., Canada & Puerto Rico only*)

1-207-288-5845 (*from any location*)

Fax: 1-207-288-6150 (*from any location*)

Secure Fax: 1-207-288-6980 (*from any location*)

Email: [orderquest@jax.org](mailto:orderquest@jax.org)

Online: [jaxmice.jax.org/support](http://jaxmice.jax.org/support)

### Technical Support

To obtain technical information or discuss research applications for JAX® Mice strains:

Tel: 1-800-422-6423 (*from U.S.A., Canada & Puerto Rico only*)

1-207-288-5845 (*from any location*)

Fax: 1-207-288-6629 (*from any location*)

Email: [micetech@jax.org](mailto:micetech@jax.org)

Online: [jaxmice.jax.org/support](http://jaxmice.jax.org/support)

### JAX® Services

Tel: 1-207-288-6294 (*from any location*)

Email: [jaxservices@jax.org](mailto:jaxservices@jax.org)

Online: [jaxservices.jax.org](http://jaxservices.jax.org)

### Regional Representatives

Find your local JAX representative at [jaxmice.jax.org/support/regionalcontacts](http://jaxmice.jax.org/support/regionalcontacts).

## NSG™: A ground-breaking tool for translational research



### Strain Type

Congenic, Spontaneous Mutation,  
Targeted Mutation (Knockout)

### Common Names

NSG™, NOD *scid* gamma (NSG™),  
NOD-*scid* IL2Rgamma null, NOD-*scid* IL2Rg null

### Appearance

Albino

### MHC Haplotype

H2<sup>g7</sup>

### Research Applications

Allogeneic and xenogeneic grafts  
Autoimmunity, regenerative medicine  
Cancer  
Humanized mice platform  
Immunodeficiency  
Infectious disease/human specific pathogens (HIV,  
Dengue, Ebola, etc.)  
Patient-derived xenograft (PDX) host  
Stem cell research

### Diet

LabDiet® 5K52/5K67 (contains 6% fat)

### Extensive Phenotypic and SNP Data

[phenome.jax.org](http://phenome.jax.org)

### Extensive Online Resources

[jaxmice.jax.org/nod-scid-gamma](http://jaxmice.jax.org/nod-scid-gamma)

### References by Therapeutic Area

[jaxmice.jax.org/nod-scid-gamma/  
nsg-breakthroughs-and-references](http://jaxmice.jax.org/nod-scid-gamma/nsg-breakthroughs-and-references)

### Join the NSG™ New Publications Alert

This monthly newsletter features recent publications utilizing the NOD.Cg-Prkdc<sup>scid</sup> Il2rg<sup>tm1Wjl</sup>/SzJ (NSG™) mouse model to advance research.

#### Sign up by visiting

[Jackson.jax.org/NSG-Newsletter-Signup](http://Jackson.jax.org/NSG-Newsletter-Signup)

**Learn more** [jaxmice.jax.org/strain/005557](http://jaxmice.jax.org/strain/005557)

# 005557 NOD.Cg-Prkdc<sup>scid</sup> Il2rg<sup>tm1Wjl</sup>/SzJ

## Pricing for: Not-For-Profit & Academic

Age	USA/Canada/Mexico		International	
	Female	Male	Female	Male
3-5 weeks	\$103.00	\$90.00	\$133.90	\$117.00
6 weeks	\$104.00	\$91.00	\$135.20	\$118.30
7 weeks	\$105.00	\$92.00	\$136.50	\$119.60
8 weeks	\$106.00	\$93.00	\$137.80	\$120.90
9 weeks	\$107.00	\$94.00	\$139.10	\$122.20
10 weeks	\$109.00	\$96.00	\$141.70	\$124.80
11 weeks	\$111.00	\$98.00	\$144.30	\$127.40
12 weeks	\$113.00	\$100.00	\$146.90	\$130.00
13 weeks	\$118.00	\$105.00	\$153.40	\$136.50
14 weeks	\$123.00	\$110.00	\$159.90	\$143.00
15 weeks	\$128.00	\$115.00	\$166.40	\$149.50
Pair	Homozygous for <i>Prkdc</i> <sup>scid</sup> , Homozygous for <i>Il2rg</i> <sup>tm1Wjl</sup> x Homozygous for <i>Prkdc</i> <sup>scid</sup> , Hemizygous for <i>Il2rg</i> <sup>tm1Wjl</sup> \$195.00		Homozygous for <i>Prkdc</i> <sup>scid</sup> , Homozygous for <i>Il2rg</i> <sup>tm1Wjl</sup> x Homozygous for <i>Prkdc</i> <sup>scid</sup> , Hemizygous for <i>Il2rg</i> <sup>tm1Wjl</sup> \$253.50	

## Pricing, Licensing & Supply Information

**Controls:** 001303 NOD.CB17-*Prkdc*<sup>scid</sup>/J; 001976 NOD/ShiLtJ

### Volume Pricing for:

Academics, Not-For Profit  
USA/Canada/Mexico & International

Quantity	Volume Pricing
15 - 49	10% off
50 - 99	12% off
100 - 174	15% off
175 +	20% off

## Pricing for: Commercial & For-Profit

(formerly Level B)

Age	USA/Canada/Mexico		International	
	Female	Male	Female	Male
3-5 weeks	\$233.85	\$195.00	\$264.75	\$222.00
6 weeks	\$234.85	\$196.00	\$266.05	\$223.30
7 weeks	\$235.85	\$197.00	\$267.35	\$224.60
8 weeks	\$236.85	\$198.00	\$268.65	\$225.90
9 weeks	\$237.85	\$199.00	\$269.95	\$227.20
10 weeks	\$239.85	\$201.00	\$272.55	\$229.80
11 weeks	\$241.85	\$203.00	\$275.15	\$232.40
12 weeks	\$243.85	\$205.00	\$277.75	\$235.00
13 weeks	\$248.85	\$210.00	\$284.25	\$241.50
14 weeks	\$253.85	\$215.00	\$290.75	\$248.00
15 weeks	\$258.85	\$220.00	\$297.25	\$254.50
Pair	Homozygous for <i>Prkdc</i> <sup>scid</sup> , Homozygous for <i>Il2rg</i> <sup>tm1Wjl</sup> x Homozygous for <i>Prkdc</i> <sup>scid</sup> , Hemizygous for <i>Il2rg</i> <sup>tm1Wjl</sup> \$430.85		Homozygous for <i>Prkdc</i> <sup>scid</sup> , Ho- mozygous for <i>Il2rg</i> <sup>tm1Wjl</sup> x Homozygous for <i>Prkdc</i> <sup>scid</sup> , Hemizygous for <i>Il2rg</i> <sup>tm1Wjl</sup> \$489.35	

## Pricing, Licensing & Supply Information

**Controls:** 001303 NOD.CB17-*Prkdc*<sup>scid</sup>/J; 001976 NOD/ShiLtJ

### Volume Pricing for:

Commercial & For-Profit  
USA/Canada/Mexico & International

Quantity	Volume Pricing
50 - 99	6% off
100 - 149	10% off
150 +	12% off

### General Terms & Conditions:

Use of MICE by companies or for-profit entities requires a license, please contact techtran@jax.org



## Strain Type

Congenic, Spontaneous Mutation

## Common Name

NOD *scid*

## Appearance

Albino

## MHC Haplotype

*H2<sup>g7</sup>*

## Research Applications

- Allogeneic and xenogeneic grafts
- Cancer (xenografts, thymic lymphomas)
- Control for NOD/ShiLtJ (diabetes free)
- Islet transplantation
- Immunodeficiency
- Toxicology

## Part of our unique patented Genetic Stability Program

[jaxmice.jax.org/gsp](http://jaxmice.jax.org/gsp)



## Extensive Phenotypic and SNP Data

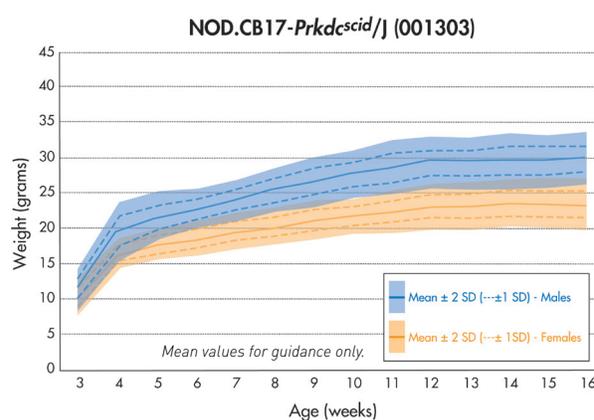
[phenome.jax.org](http://phenome.jax.org)

## Diet

LabDiet® 5K52/5K67 (contains 6% fat)

## Body Weight Data

This weight chart is based on mice from Bar Harbor. ([jaxmice.jax.org/support/weight/001303](http://jaxmice.jax.org/support/weight/001303))



## Pricing, Licensing & Supply Information

Age	USA/Canada/Mexico		International	
	Female	Male	Female	Male
3-4 weeks	\$95.53	\$97.28	\$124.20	\$126.50
5 weeks	\$98.67	\$100.48	\$128.30	\$130.70
6-8 weeks	\$102.02	\$102.12	\$132.70	\$132.80
9 weeks	\$109.75	\$111.76	\$142.70	\$145.30
10 weeks	\$115.67	\$117.78	\$150.40	\$153.20
11 weeks	\$119.48	\$121.69	\$155.40	\$158.20
12 weeks	\$122.98	\$125.30	\$159.90	\$162.90

**Controls:** 001976 NOD/ShiLtJ; selection of control mice depends upon the nature of the research.

**Learn more** [jaxmice.jax.org/strain/001303](http://jaxmice.jax.org/strain/001303)

# 001803 CBySmn.CB17-Prkdc<sup>scid</sup>/J



## Strain Type

Congenic, Spontaneous Mutation

## Common Names

BALB *scid*, BALB/c *scid*

## Appearance

Albino

## MHC Haplotype

H2<sup>d</sup>

## Research Applications

Allogeneic and xenogeneic grafts  
 Autoimmunity & inflammation (psoriasis, IBD)  
 B & T cell deficiency  
 Cancer (xenografts)  
 Immunodeficiency  
 Immunology  
 Inflammation  
 Lymphoid tissue defects  
 Toxicology  
 Virology (HIV)

## Diet

LabDiet® 5K52/5K67 (contains 6% fat)

## Pricing, Licensing & Supply Information

Age	USA/Canada/ Mexico		International	
	Female	Male	Female	Male
3-5 weeks	\$73.70	\$68.34	\$95.90	\$88.90
6 weeks	\$74.57	\$68.34	\$97.00	\$88.90
7-8 weeks	\$77.46	\$70.76	\$100.70	\$92.00
9 weeks	N/A	\$74.68	N/A	\$97.10
10 weeks	N/A	\$78.43	N/A	\$102.00

**Controls:** 001026 BALB/cByJ

**Volume Pricing** is available for this strain.

Learn more [jaxmice.jax.org/strain/001803](http://jaxmice.jax.org/strain/001803)



## Strain Type

Congenic, Targeted Mutation (Knockout)

## Common Names

B6 RAG1<sup>NULL</sup>, Rag1 KO, Rag1 -/-, B6 Rag1

## Appearance

Black

## MHC Haplotype

H2<sup>b</sup>

## Research Applications

- Cancer (xenografts)
- Immunodeficiency
- Toxicology
- Transplantation
- Vaccine development

## Diet

LabDiet® 5K52/5K67 (contains 6% fat)

## Pricing, Licensing & Supply Information

	USA/Canada/ Mexico	International
	Homozygous for <i>Rag1<sup>tm1Mom</sup></i>	Homozygous for <i>Rag1<sup>tm1Mom</sup></i>
Age	Female / Male	Female / Male
3-4 weeks	\$118.37	\$153.90
5-6 weeks	\$122.42	\$159.20
7-9 weeks	\$134.08	\$174.40
10-12 weeks	\$149.26	\$194.10

**Controls:** 000664 C57BL/6J

**Volume Pricing** is available for this strain.

**Cryopreserved Embryos** are available for this strain.

**General Terms & Conditions:** Use of MICE by companies or for-profit entities requires a license prior to shipping, see the strain data sheet for full details.



## 007850 J:NU

**Strain Type**

Outbred Nude, Spontaneous Mutation

**Common Name**

Nude, Outbred Nude, Athymic Nude

**Appearance**

Homozygous: Nude

Heterozygous: Albino

**MHC Haplotype**

Unknown

**Research Applications**

Cancer therapeutics

Immunodeficiency

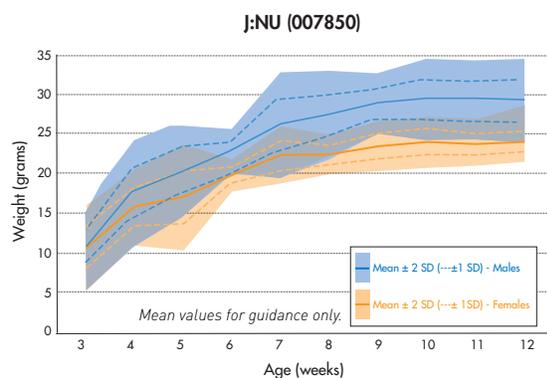
Tumor transplant hosts

**Diet**

LabDiet® 5K52/5K67 (contains 6% fat)

**Body Weight Data**

This weight chart is based on mice from Bar Harbor.

**Pricing, Licensing & Supply Information**

Age	USA/Canada/Mexico		International	
	Female	Male	Female	Male
Heterozygous for <i>Foxn1<sup>nu</sup></i>				
3-5 weeks	\$40.75	\$43.20	\$53.00	\$56.20
6 weeks	\$43.65	\$46.30	\$56.80	\$60.20
7 weeks	\$46.45	\$49.25	\$60.40	\$64.10
8 weeks	\$49.30	\$52.30	\$64.10	\$68.00
9 weeks	\$53.10	\$56.30	\$69.10	\$73.20
10 weeks	\$56.05	\$59.45	\$72.90	\$77.30
Homozygous for <i>Foxn1<sup>nu</sup></i>				
Homozygous for <i>Foxn1<sup>nu</sup></i>				
3-5 weeks	\$49.30	\$46.35	\$64.10	\$60.30
6 weeks	\$57.90	\$49.55	\$75.30	\$64.50
7 weeks	\$57.90	\$50.15	\$75.30	\$65.20
8 weeks	\$57.90	\$53.35	\$75.30	\$69.40
9 weeks	\$57.90	\$56.30	\$75.30	\$73.20
10 weeks	\$57.90	\$59.45	\$75.30	\$77.30

**Controls:** Heterozygote from the colony

Subscribe to JAX® eNews to receive bi-monthly updates on available inventory ([jaxmice.jax.org/news](http://jaxmice.jax.org/news)).

Learn more [jaxmice.jax.org/strain/007850](http://jaxmice.jax.org/strain/007850)



**Strain Type**

Inbred Strain, Spontaneous Mutation

**Common Names**

Nude, Inbred Nude, Athymic Nude

**Appearance**

Homozygous: Nude

Heterozygous: Albino

**MHC Haplotype**

H2<sup>q</sup>

**Research Applications**

Cancer therapeutics

Immunodeficiency

Tumor transplant hosts

**Extensive Phenotypic and SNP Data**

[phenome.jax.org](http://phenome.jax.org)

**Diet**

LabDiet® 5K52/5K67 (contains 6% fat)

**Pricing, Licensing & Supply Information**

	USA/Canada/ Mexico	International
	Heterozygous for <i>Foxn1<sup>nu</sup></i> or Homozygous for <i>Foxn1<sup>nu</sup></i>	Heterozygous for <i>Foxn1<sup>nu</sup></i> or Homozygous for <i>Foxn1<sup>nu</sup></i>
Age	Female / Male	Female / Male
3-5 weeks	\$65.80	\$85.60
6 weeks	\$69.40	\$90.30
7 weeks	\$73.05	\$95.00
8 weeks	\$76.60	\$99.60
9 weeks	\$80.25	\$104.40
10 weeks	\$83.90	\$109.10

**Controls:** Heterozygote from the colony



## 002448 129S1/SvlmJ

**Common Names**

129S1

**Appearance**

White-bellied agouti

**MHC Haplotype***H2<sup>b</sup>***Part of our unique patented Genetic Stability Program**[jaxmice.jax.org/gsp](http://jaxmice.jax.org/gsp)**Research Applications**

Gene targeting

Infectious disease (anthrax)

Neurobiology (schizophrenia)

**Extensive Phenotypic and SNP Data**[phenome.jax.org](http://phenome.jax.org)**Genome Sequence Data**[sanger.ac.uk/resources/mouse/genomes](http://sanger.ac.uk/resources/mouse/genomes)**Diet**

LabDiet® 5K52/5K67 (contains 6% fat)

**Pricing, Licensing & Supply Information**

Age	USA/Canada/Mexico		International	
	Female	Male	Female	Male
3-4 weeks	\$42.60	\$42.60	\$55.40	\$55.40
5 weeks	\$44.30	\$44.30	\$57.60	\$57.60
6-9 weeks	\$49.92	\$49.92	\$64.90	\$64.90
10 weeks	\$57.20	\$57.20	\$74.40	\$74.40

Cryopreserved Embryos are available for this strain.

Learn more [jaxmice.jax.org/strain/002448](http://jaxmice.jax.org/strain/002448)



### Common Names

129, 129Sv, 129X1

### Appearance

Pink-eyed, light-bellied, light chinchilla or albino

### MHC Haplotype

*H2<sup>bc</sup>*

### Research Applications

Age-related hearing loss

Cancer (lung)

Cell biology

Gene targeting

Infectious disease (anthrax), resistance

Neurobiology (schizophrenia)

### Extensive Phenotypic and SNP Data

[phenome.jax.org](http://phenome.jax.org)

### Diet

LabDiet® 5K52/5K67 (contains 6% fat)

### Pricing, Licensing & Supply Information

Age	USA/Canada/ Mexico		International	
	Female	Male	Female	Male
3-4 weeks	\$31.36	\$29.54	\$40.80	\$38.50
5 weeks	\$31.96	\$30.10	\$41.60	\$39.20
6 weeks	\$34.32	\$34.32	\$44.70	\$44.70
7 weeks	\$37.23	\$37.23	\$48.40	\$48.40
8 weeks	\$39.31	\$40.04	\$51.20	\$52.10
9 weeks	\$42.22	\$43.06	\$54.90	\$56.00
10 weeks	\$46.06	\$46.07	\$59.90	\$59.90
11 weeks	\$48.87	\$48.93	\$63.60	\$63.70

**Cryopreserved Embryos** are available for this strain.

**JAX® mES Cells** are available from this strain, page 87.

## 000646 A/J

**Common Name**

A, AJ

**Appearance**

Albino

**MHC Haplotype**H2<sup>a</sup>**Research Applications**

Age-related hearing loss

Asthma

Cancer (lung, breast)

Craniofacial defects

Emphysema

Immunology research

Infectious disease (anthrax)

Muscular dystrophy

**Extensive Phenotypic and SNP Data**

phenome.jax.org

**Genome Sequence Data**

sanger.ac.uk/resources/mouse/genomes

**Diet**

LabDiet® 5K52/5K67 (contains 6% fat)

**Pricing, Licensing & Supply Information**

Age	USA/Canada/ Mexico	International
	Female / Male	Female / Male
3-5 weeks	\$34.96	\$45.50
6 weeks	\$38.18	\$49.70
7 weeks	\$41.57	\$54.10
8 weeks	\$44.79	\$58.30
9 weeks	\$48.24	\$62.80
10 weeks	\$51.58	\$67.10
11 weeks	\$54.86	\$71.40
12 weeks	\$58.19	\$75.70
13 weeks	\$61.47	\$80.00
14 weeks	\$64.80	\$84.30
15 weeks	\$68.08	\$88.60
16 weeks	\$71.42	\$92.90
17 weeks	\$74.87	\$97.40
18 weeks	\$78.09	\$101.60
19 weeks	\$81.48	\$106.00
20 weeks	\$84.70	\$110.20

**Volume Pricing** is available for this strain.Learn more [jaxmice.jax.org/strain/000646](http://jaxmice.jax.org/strain/000646)



### Common Name

AK, AKR

### Appearance

Albino

### MHC Haplotype

*H2<sup>k</sup>*

### Research Applications

Atherosclerosis

Diet-induced obesity (pre-diabetes)

Endocrine defects

Epilepsy

Immunology (complement deficient)

Leukemia

### Extensive Phenotypic and SNP Data

[phenome.jax.org](http://phenome.jax.org)

### Genome Sequence Data

[sanger.ac.uk/resources/mouse/genomes](http://sanger.ac.uk/resources/mouse/genomes)

### Diet

LabDiet® 5K52/5K67 (contains 6% fat)

### Pricing, Licensing & Supply Information

Age	USA/Canada/ Mexico		International	
	1-7 Mice Female	8 + Mice Female	1-7 Mice Female	8 + Mice Female
3-5 weeks	\$93.00	\$43.45	\$120.90	\$56.49
6 weeks	\$96.31	\$45.00	\$125.21	\$58.50
7 weeks	\$99.63	\$46.55	\$129.51	\$60.51
8 weeks	\$102.94	\$48.09	\$133.82	\$62.52
9 weeks	\$106.25	\$49.64	\$138.13	\$64.53
10 weeks	N/A	N/A	N/A	N/A
Age	1-7 Mice Male	8 + Mice Male	1-7 Mice Male	8 + Mice Male
3-5 weeks	\$93.00	\$43.45	\$120.90	\$56.49
6 weeks	\$96.31	\$45.00	\$125.21	\$58.50
7 weeks	\$99.63	\$46.55	\$129.51	\$60.51
8 weeks	\$102.94	\$48.09	\$133.82	\$62.52
9 weeks	\$106.25	\$49.64	\$138.13	\$64.53
10 weeks	\$109.56	\$51.19	\$142.43	\$66.54

# 001026 BALB/cByJ



## Common Name

BALBc Bailey, CBy

## Appearance

Albino

## MHC Haplotype

H2<sup>d</sup>

## Research Applications

- Age-related hearing loss
- Autoimmunity (experimental allergic orchitis, EAO)
- Establishing ascites tumors
- Immunology
- Late-onset cancer (lung, mammary, renal, and reticular tumors)
- Monoclonal antibodies
- Multiple sclerosis (experimental autoimmune encephalomyelitis, EAE)
- Neurobiology
- Organic aciduria
- Vaccine development

## Part of our unique patented Genetic Stability Program

[jaxmice.jax.org/gsp](http://jaxmice.jax.org/gsp)



## Extensive Phenotypic and SNP Data

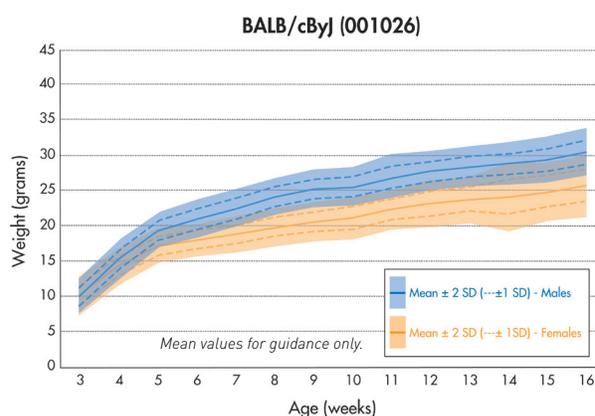
[phenome.jax.org](http://phenome.jax.org)

## Diet

LabDiet® 5K52/5K67 (contains 6% fat)

## Body Weight Data

This weight chart is based on mice from Bar Harbor. ([jaxmice.jax.org/support/weight/001026](http://jaxmice.jax.org/support/weight/001026))



## Pricing, Licensing & Supply Information

Age	USA/Canada/ Mexico	International
	Female / Male	Female / Male
3-5 weeks	\$27.50	\$35.80
6 weeks	\$30.15	\$39.20
7 weeks	\$32.80	\$42.70
8 weeks	\$35.45	\$46.10
9 weeks	\$38.10	\$49.60
10 weeks	\$40.75	\$53.00
11 weeks	\$43.40	\$56.50
12 weeks	\$46.05	\$59.90

JAX® mES Cells are available from this strain, page 87.

Learn more [jaxmice.jax.org/strain/001026](http://jaxmice.jax.org/strain/001026)



## Common Names

C, BALBc, BALBc Jackson

## Appearance

Albino

## MHC Haplotype

H2<sup>d</sup>

## Research Applications

- Anxiety
- Arthritis
- Asthma
- IBD
- Infectious disease (anthrax)
- Late-onset cancer (mammary, lung, renal, and reticular tumors)
- Neurobiology

## Genome Sequence Data

[sanger.ac.uk/resources/mouse/genomes](http://sanger.ac.uk/resources/mouse/genomes)

## Extensive Phenotypic and SNP Data

[phenome.jax.org](http://phenome.jax.org)

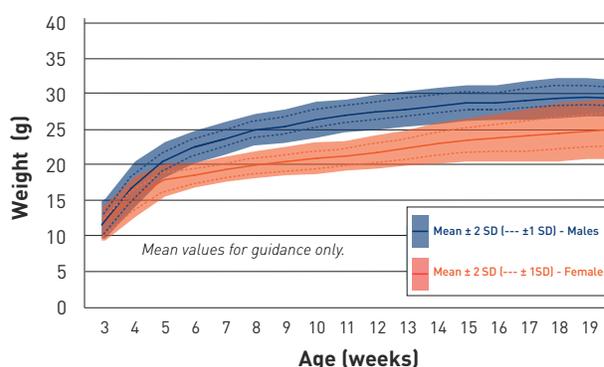
## Diet

LabDiet® 5K52/5K67 (contains 6% fat)

## Body Weight Data

This weight chart is based on mice from Bar Harbor. ([jaxmice.jax.org/support/weight/000651](http://jaxmice.jax.org/support/weight/000651))

**BALB/cJ (000651)**



## Pricing, Licensing & Supply Information

Age	USA/Canada/Mexico		International	
	Female	Male	Female	Male
3 weeks	\$20.40	\$17.60	\$26.60	\$22.90
4 weeks	\$20.96	\$18.30	\$27.30	\$23.80
5 weeks	\$22.56	\$20.72	\$29.40	\$27.00
6 weeks	\$23.01	\$21.24	\$30.00	\$27.70
7 weeks	\$25.50	\$24.09	\$33.20	\$31.40
8 weeks	\$25.76	\$24.58	\$33.50	\$32.00
9 weeks	\$26.99	\$25.28	\$35.10	\$32.90
10 weeks	\$31.16	\$26.83	\$40.60	\$34.90
11 weeks	\$31.62	N/A	\$41.20	N/A
12 weeks	\$33.28	N/A	\$43.30	N/A
13 weeks	\$35.05	N/A	\$45.60	N/A
14 weeks	\$36.66	N/A	\$47.70	N/A
15 weeks	\$38.22	N/A	\$49.70	N/A

**Volume Pricing** is available for this strain.

**JAX® mES Cells** are available from this strain, page 87.

**Learn more** [jaxmice.jax.org/strain/000651](http://jaxmice.jax.org/strain/000651)

# 002282 BTBR $T^+ Itpr3^{tf}/J$



## Common Name

BTBR

## Appearance

Black and Tan, Tufted

## MHC Haplotype

$H2^b$

## Research Applications

Autism

Dermatology

Neurobiology (schizophrenia)

Neurodevelopment

## Extensive Phenotypic and SNP Data

[phenome.jax.org](http://phenome.jax.org)

## Diet

LabDiet® 5K52/5K67 (contains 6% fat)

## Pricing, Licensing & Supply Information

Age	USA/Canada/ Mexico	International
	Female / Male	Female / Male
3-5 weeks	\$91.70	\$119.30
6 weeks	\$94.35	\$122.70
7 weeks	\$97.00	\$126.10
8 weeks	\$99.65	\$129.60
9 weeks	\$102.30	\$133.00
10 weeks	\$104.95	\$136.50

**JAX® mES Cells** are available from this strain, see page 87.

[Learn more jaxmice.jax.org/strain/002282](http://jaxmice.jax.org/strain/002282)



## Common Name

C3H Heston, C3H, C3

## Appearance

Agouti

## MHC Haplotype

H2<sup>k</sup>

## Research Applications

Alopecia areata

Cancer (hepatomas)

Epilepsy

Infectious diseases (anthrax, tularemia)

Retinal degeneration

*Tlr4* deficiency

## Part of our unique patented Genetic Stability Program

[jaxmice.jax.org/gsp](http://jaxmice.jax.org/gsp)



## Diet

LabDiet® 5K52/5K67 (contains 6% fat)

## Extensive Phenotypic and SNP Data

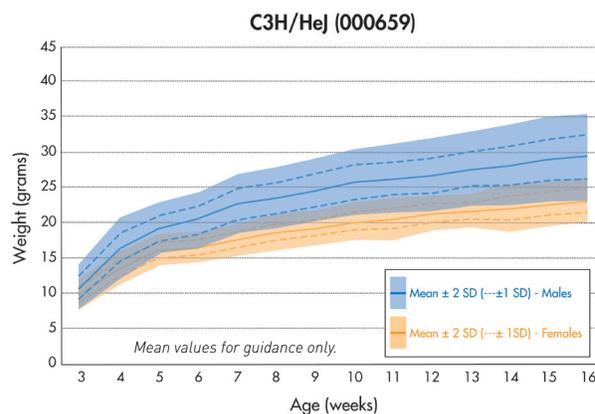
[phenome.jax.org](http://phenome.jax.org)

## Genome Sequence Data

[sanger.ac.uk/resources/mouse/genomes](http://sanger.ac.uk/resources/mouse/genomes)

## Body Weight Data

This weight chart is based on mice from Bar Harbor. ([jaxmice.jax.org/support/weight/000659](http://jaxmice.jax.org/support/weight/000659))



## Pricing, Licensing & Supply Information

Age	USA/Canada/Mexico		International	
	Female	Male	Female	Male
3 weeks	\$25.44	\$22.74	\$33.10	\$29.10
4-5 weeks	\$25.44	\$22.74	\$33.10	\$29.60
6 weeks	\$28.09	\$25.44	\$36.60	\$33.10
7-9 weeks	\$30.85	\$28.25	\$40.20	\$36.80
10-12 weeks	\$35.72	\$34.40	\$46.50	\$44.80
13 weeks	\$38.53	\$36.99	\$50.10	\$48.10
14 weeks	\$38.53	\$39.96	\$50.10	\$52.00
15 weeks	\$38.53	\$42.82	\$50.10	\$55.70

JAX® mES Cells are available from this strain, page 87.

Learn more [jaxmice.jax.org/strain/000659](http://jaxmice.jax.org/strain/000659)

## 000664 C57BL/6J

**Common Names**

B6, Black 6

**Appearance**

Black

**MHC Haplotype***H2<sup>b</sup>***Research Applications**

Addiction (alcohol, morphine)  
 Age-related hearing loss  
 Atherosclerosis  
 Bone density  
 Diet-induced obesity (pre-diabetes)  
 Eye abnormalities  
 Hair loss and dermatitis  
 Hydrocephaly  
 Infectious disease (anthrax), resistance  
 Inflammatory bowel disease (IBD)  
 Malocclusion  
 Metabolic syndrome

**Part of our unique patented Genetic Stability Program**

jaxmice.jax.org/gsp

**Diet**

LabDiet® 5K52/5K67 (contains 6% fat)

**Extensive Phenotypic and SNP Data**

phenome.jax.org

**Genome Sequence Data**

ensembl.org  
 ncbi.nlm.nih.gov/mapview/map\_search.cgi?taxid=10090

**Inventoried Diet-Induced Obesity (DIO) Mice**

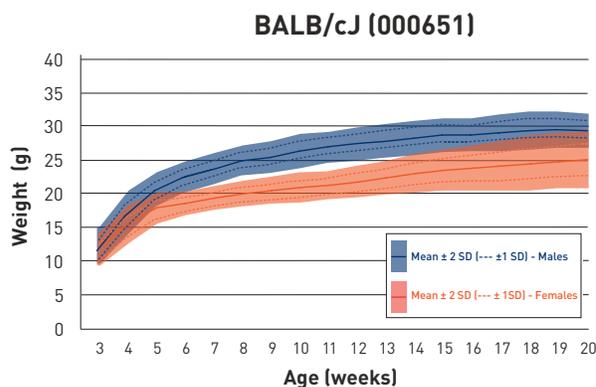
Study-ready C57BL/6J DIO mice are available at 7-30 weeks of age. For pricing visit [jaxmice.jax.org/diomice](http://jaxmice.jax.org/diomice) or subscribe to JAX® Mice eNews at [jaxmice.jax.org/news](http://jaxmice.jax.org/news) for bi-weekly inventory report and pricing.

**Aged Mice**

Study-ready aged C57BL/6J males are available at 6 months and older. Subscribe to JAX® Mice eNews at [jaxmice.jax.org/news](http://jaxmice.jax.org/news) for bi-weekly inventory report and pricing.

**Body Weight Data**

This weight chart is based on mice from Bar Harbor. ([jaxmice.jax.org/support/weight/000664](http://jaxmice.jax.org/support/weight/000664))



Learn more [jaxmice.jax.org/strain/000664](http://jaxmice.jax.org/strain/000664)

## Pricing, Licensing &amp; Supply Information

Age	USA/Canada/Mexico		International	
	Female	Male	Female	Male
3 weeks	\$21.05	\$19.25	\$27.40	\$25.10
4 weeks	\$21.68	\$20.02	\$28.20	\$26.10
5 weeks	\$23.23	\$22.94	\$30.20	\$29.90
6 weeks	\$23.90	\$23.58	\$31.10	\$30.70
7 weeks	\$25.25	\$25.40	\$32.90	\$33.10
8 weeks	\$26.00	\$26.16	\$33.80	\$34.10
9 weeks	\$26.27	\$26.16	\$34.20	\$34.10
10 weeks	\$35.22	\$35.24	\$45.80	\$45.90
11 weeks	\$36.17	\$36.51	\$47.10	\$47.50
12 weeks	\$37.20	\$37.15	\$48.40	\$48.30
13 weeks	\$37.45	\$41.65	\$48.70	\$54.20
14 weeks	\$38.73	\$45.19	\$50.40	\$58.80
15 weeks	\$41.30	\$50.25	\$53.70	\$65.40
16 weeks	\$44.08	\$50.14	\$57.40	\$65.20
17 weeks	\$46.87	\$53.30	\$61.00	\$69.30
18 weeks	\$49.54	\$56.29	\$64.50	\$73.20
19 weeks	\$52.12	\$59.23	\$67.80	\$77.00
20 weeks	\$54.80	\$62.27	\$71.30	\$81.00
21 weeks	\$57.47	\$65.38	\$74.80	\$85.00
22 weeks	\$60.36	\$68.60	\$78.50	\$89.20
23 weeks	\$63.04	\$74.76	\$82.00	\$97.20
24 weeks	\$65.71	\$80.41	\$85.50	\$104.60

**Volume Pricing** is available for this strain.

**Cryopreserved Embryos** are available for this strain.

**JAX® Morula** is available from this strain, see page 88.

# 005304 C57BL/6NJ



## Common Name

B6NJ, B6N

## Appearance

Black

## MHC Haplotype

*H2<sup>b</sup>*

## Research Applications

Control strain for mutants on B6N genetic background, some behavioral and physiological differences compared to C57BL/6J.

## Part of our unique patented Genetic Stability Program

[jaxmice.jax.org/gsp](http://jaxmice.jax.org/gsp)



## Extensive Phenotypic and SNP Data

[phenome.jax.org](http://phenome.jax.org)

## Genome Sequence Data

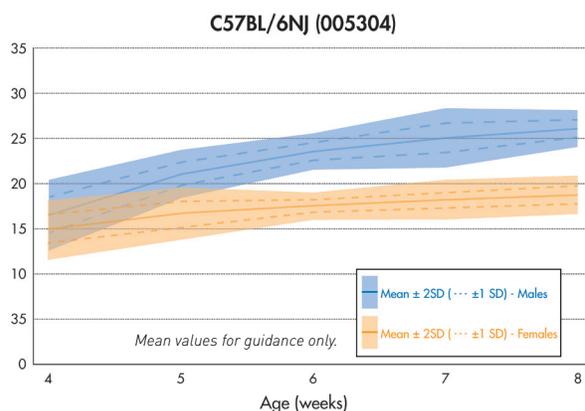
[sanger.ac.uk/resources/mouse/genomes](http://sanger.ac.uk/resources/mouse/genomes)

## Diet

LabDiet® 5K52/5K67 (contains 6% fat)

## Body Weight Data

This weight chart is based on mice from Bar Harbor. ([jaxmice.jax.org/support/weight/005304](http://jaxmice.jax.org/support/weight/005304))



## Pricing, Licensing & Supply Information

Age	USA/Canada/Mexico		International	
	Female	Male	Female	Male
3 weeks	\$21.05	\$20.41	\$27.40	\$26.60
4 weeks	\$21.68	\$20.41	\$28.20	\$26.60
5 weeks	\$23.23	\$23.16	\$30.20	\$30.20
6 weeks	\$23.90	\$23.58	\$31.10	\$30.70
7 weeks	\$26.11	\$25.40	\$34.00	\$33.10
8 weeks	\$26.61	\$26.16	\$34.60	\$34.10
9 weeks	\$27.14	\$26.92	\$35.30	\$35.00
10 weeks	\$35.22	\$35.56	\$45.80	\$46.30
11 weeks	\$36.80	\$36.83	\$47.90	\$47.90
12 weeks	\$37.20	\$37.47	\$48.40	\$48.80

Volume Pricing is available for this strain.

Learn more [jaxmice.jax.org/strain/005304](http://jaxmice.jax.org/strain/005304)



### Common Names

B10, Black 10

### Appearance

Black

### MHC Haplotype

*H2<sup>b</sup>*

### Research Applications

Cancer

Immunology and inflammation

Multiple sclerosis (experimental autoimmune encephalomyelitis, EAE)

Addiction (alcohol)

### Extensive Phenotypic and SNP Data

[phenome.jax.org](http://phenome.jax.org)

### Diet

LabDiet® 5K52/5K67 (contains 6% fat)

### Pricing, Licensing & Supply Information

Age	USA/Canada/Mexico		International	
	Female	Male	Female	Male
3-4 weeks	\$29.32	\$28.22	\$38.20	\$36.70
5 weeks	\$29.32	\$29.32	\$38.20	\$38.20
6 weeks	\$32.67	\$32.67	\$42.50	\$42.50
7 weeks	\$36.03	\$36.03	\$46.90	\$46.90
8 weeks	\$39.44	\$39.44	\$51.30	\$51.30
9 weeks	\$42.85	\$42.85	\$55.80	\$55.80
10 weeks	\$46.26	\$46.26	\$60.20	\$60.20
11 weeks	\$49.61	\$49.61	\$64.50	\$64.50
12 weeks	\$52.97	\$52.97	\$68.90	\$68.90
13 weeks	\$56.38	\$56.38	\$73.30	\$73.30
14 weeks	\$59.73	\$59.73	\$77.70	\$77.70
15 weeks	\$63.20	\$63.20	\$82.20	\$82.20



# 000656 CBA/J



## Common Names

CBA, CBA Jackson

## Appearance

Agouti

## MHC Haplotype

*H2<sup>k</sup>*

## Research Applications

Alopecia areata

Cancer (hepatomas)

Epilepsy

Infectious diseases (anthrax, tularemia)

Retinal degeneration

*Tlr4* deficiency

## Part of our unique patented Genetic Stability Program

[jaxmice.jax.org/gsp](http://jaxmice.jax.org/gsp)



## Extensive Phenotypic and SNP Data

[phenome.jax.org](http://phenome.jax.org)

## Genome Sequence Data

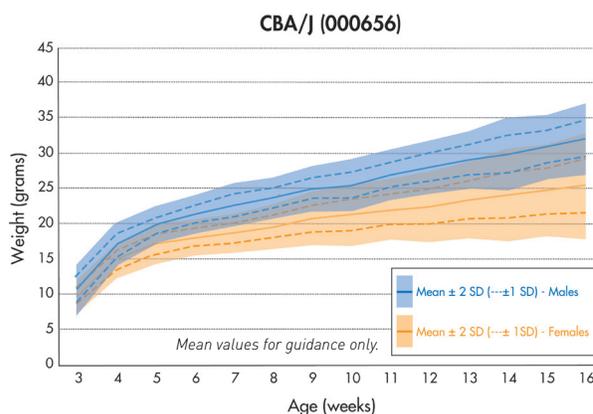
[sanger.ac.uk/resources/mouse/genomes](http://sanger.ac.uk/resources/mouse/genomes)

## Diet

LabDiet® 5K52/5K67 (contains 6% fat)

## Body Weight Data

This weight chart is based on mice from Bar Harbor. ([jaxmice.jax.org/support/weight/000656](http://jaxmice.jax.org/support/weight/000656))



## Pricing, Licensing & Supply Information

Age	USA/Canada/Mexico		International	
	Female	Male	Female	Male
3 weeks	\$26.90	\$24.59	\$35.00	\$32.00
4 weeks	\$27.39	\$25.08	\$35.70	\$32.70
5 weeks	\$27.83	\$25.58	\$36.20	\$33.30
6 weeks	\$29.87	\$28.05	\$38.90	\$36.50
7 weeks	\$35.20	\$29.32	\$45.80	\$38.20
8 weeks	\$35.20	\$32.40	\$45.80	\$42.20
9 weeks	\$38.72	\$32.40	\$50.40	\$42.20
10 weeks	\$43.12	\$40.87	\$56.10	\$53.20
11 weeks	\$46.48	\$44.66	\$60.50	\$58.10
12 weeks	\$49.78	\$47.41	\$64.80	\$61.70

Volume Pricing is available for this strain.

Learn more [jaxmice.jax.org/strain/000656](http://jaxmice.jax.org/strain/000656)



### Common Name

CBA Carter J

### Appearance

Agouti

### MHC Haplotype

*H2<sup>k</sup>*

### Research Applications

Cancer

Mild adult onset diabetes-obesity syndrome

Myeloid leukemia (induced)

### Extensive Phenotypic and SNP Data

[phenome.jax.org](http://phenome.jax.org)

### Diet

LabDiet® 5K52/5K67 (contains 6% fat)

### Pricing, Licensing & Supply Information

Age	USA/Canada/ Mexico	International
	Female / Male	Female / Male
3-5 weeks	\$35.90	\$46.70
6 weeks	\$39.21	\$51.00
7 weeks	\$42.53	\$55.30
8 weeks	\$45.84	\$59.60
9 weeks	\$49.15	\$63.90
10 weeks	\$52.46	\$68.20

**Learn more** [jaxmice.jax.org/strain/000654](http://jaxmice.jax.org/strain/000654)

## 000670 DBA/1J

**Common Name**

D1

**Appearance**

Dilute brown

**MHC Haplotype***H2<sup>q</sup>***Research Applications**

Age-related hearing loss

Arthritis

Cancer (mammary)

Immune-mediated nephritis

Neurobiology (seizures)

**Part of our unique patented Genetic Stability Program**[jaxmice.jax.org/gsp](http://jaxmice.jax.org/gsp)**Extensive Phenotypic and SNP Data**[phenome.jax.org](http://phenome.jax.org)**Diet**

LabDiet® 5K0Q (6% oval)

**Pricing, Licensing & Supply Information**

Age	USA/Canada/Mexico		International	
	Female	Male	Female	Male
3-4 weeks	\$35.98	\$36.82	\$46.80	\$47.90
5 weeks	\$37.80	\$39.16	\$49.20	\$51.00
6-7 weeks	\$40.30	\$39.94	\$52.40	\$52.00
8 weeks	\$41.08	\$41.29	\$53.50	\$53.70
9 weeks	\$41.08	\$42.08	\$53.50	\$54.80
10 weeks	\$49.82	\$51.20	\$64.80	\$66.60
11 weeks	N/A	\$55.70	N/A	\$72.50
12 weeks	N/A	\$58.62	N/A	\$76.30

**Volume Pricing** is available for this strain.



### Common Name

D2

### Appearance

Dilute brown

### MHC Haplotype

*H2<sup>d</sup>*

### Research Applications

- Addiction (alcohol, morphine)
- Age-related hearing loss
- Atherosclerosis
- Glaucoma
- Immunology
- Neurobiology (seizures)

### Part of our unique patented Genetic Stability Program

[jaxmice.jax.org/gsp](http://jaxmice.jax.org/gsp)



### Extensive Phenotypic and SNP Data

[phenome.jax.org](http://phenome.jax.org)

### Genome Sequence Data

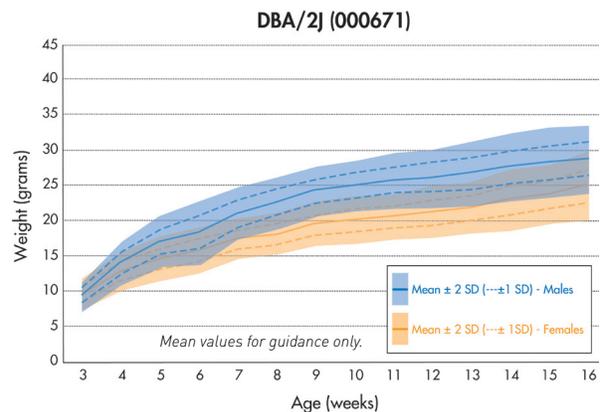
[sanger.ac.uk/resources/mouse/genomes](http://sanger.ac.uk/resources/mouse/genomes)

### Diet

LabDiet® 5K0Q (6% oval)

### Body Weight Data

This weight chart is based on mice from Bar Harbor. ([jaxmice.jax.org/support/weight/000671](http://jaxmice.jax.org/support/weight/000671))



### Pricing, Licensing & Supply Information

Age	USA/Canada/Mexico		International	
	Female	Male	Female	Male
3-4 weeks	\$29.26	\$26.42	\$38.10	\$34.40
5 weeks	\$29.26	\$26.92	\$38.10	\$35.00
6 weeks	\$32.33	\$30.05	\$42.10	\$39.10
7 weeks	\$35.57	\$35.41	\$46.30	\$46.10
8-9 weeks	\$36.25	\$35.41	\$47.20	\$46.10
10-12 weeks	\$40.55	\$42.29	\$52.80	\$55.00
13 weeks	\$43.14	\$45.26	\$56.10	\$58.90
14 weeks	\$46.00	\$48.28	\$59.80	\$62.80
15 weeks	\$48.76	\$51.30	\$63.40	\$66.70

**Volume Pricing** is available for this strain.

**JAX® mES Cells** are available from this strain, page 87.

**Learn more** [jaxmice.jax.org/strain/000671](http://jaxmice.jax.org/strain/000671)

# 001800 FVB/NJ



## Common Names

FVB, Friend Virus B

## Appearance

Albino

## MHC Haplotype

H2<sup>q</sup>

## Research Applications

Cancer (squamous cell carcinomas)

Immunology

Infectious disease (anthrax)

Retinal degeneration

Thermoregulation

Transgene microinjection

## Part of our unique patented Genetic Stability Program

[jaxmice.jax.org/gsp](http://jaxmice.jax.org/gsp)



## Extensive Phenotypic and SNP Data

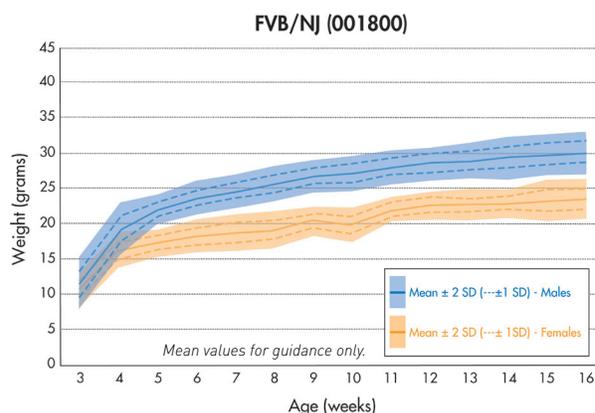
[phenome.jax.org](http://phenome.jax.org)

## Diet

LabDiet® 5K52/5K67 (contains 6% fat)

## Body Weight Data

This weight chart is based on mice from Bar Harbor. ([jaxmice.jax.org/support/weight/001800](http://jaxmice.jax.org/support/weight/001800))



## Pricing, Licensing & Supply Information

Age	USA/Canada/Mexico		International	
	Female	Male	Female	Male
3-4 weeks	\$21.94	\$19.88	\$28.60	\$25.90
5-6 weeks	\$22.74	\$22.63	\$29.60	\$29.50
7 weeks	\$28.78	\$25.65	\$37.50	\$33.40
8-9 weeks	\$28.78	\$27.51	\$37.50	\$35.80
10 weeks	\$38.11	\$35.03	\$49.60	\$45.60
11 weeks	\$41.39	\$38.11	\$53.90	\$49.60
12 weeks	\$43.41	\$41.08	\$56.50	\$53.50
13 weeks	\$46.38	\$43.99	\$60.30	\$57.20
14 weeks	\$49.29	\$46.91	\$64.10	\$61.00
15 weeks	\$52.31	\$49.77	\$68.10	\$64.80

**Volume Pricing** is available for this strain.

**JAX® mES Cells** are available from this strain, page 87.

[Learn more jaxmice.jax.org/strain/001800](http://jaxmice.jax.org/strain/001800)



## Common Name

Non-obese diabetic

## Appearance

Albino

## MHC Haplotype

*H2<sup>g7</sup>*

## Research Applications

Age-related hearing loss

Autoimmunity

Immunology

Type 1 diabetes (IDDM)

Wound healing

## Part of our unique patented Genetic Stability Program

[jaxmice.jax.org/gsp](http://jaxmice.jax.org/gsp)



## Extensive Phenotypic and SNP Data

[phenome.jax.org](http://phenome.jax.org)

## Genome Sequence Data

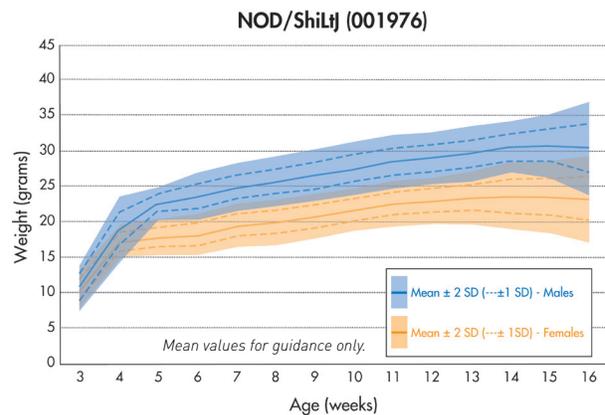
[sanger.ac.uk/resources/mouse/genomes](http://sanger.ac.uk/resources/mouse/genomes)

## Diet

LabDiet® 5K52/5K67 (contains 6% fat)

## Body Weight Data

This weight chart is based on mice from Bar Harbor. ([jaxmice.jax.org/support/weight/001976](http://jaxmice.jax.org/support/weight/001976))



## Pricing, Licensing & Supply Information

Age	USA/Canada/Mexico		International	
	Female	Male	Female	Male
3 weeks	\$36.92	\$31.80	\$48.00	\$41.40
4 weeks	\$39.05	\$33.07	\$50.80	\$43.00
5 weeks	\$41.86	\$38.34	\$54.50	\$49.90
6 weeks	\$43.07	\$39.77	\$56.00	\$51.80
7 weeks	\$46.64	\$43.45	\$60.70	\$56.50
8 weeks	\$49.89	\$46.75	\$64.90	\$60.80
9 weeks	N/A	\$47.85	N/A	\$62.30
10-11 weeks	N/A	\$51.04	N/A	\$66.40
12 weeks	N/A	\$55.83	N/A	\$72.60

**Volume Pricing** is available for this strain.

**Cryopreserved Embryos** are available for this strain.

**Learn more** [jaxmice.jax.org/strain/001976](http://jaxmice.jax.org/strain/001976)

## 004456 NONcNZO10/LtJ

**Strain Type**

Recombinant Congenic

**Common Name**

RCS-10

**Appearance**

Albino

**MHC Haplotype** $H2^{nb1}$ **Research Applications**

Diabetic complications

Obesity

Type 2 diabetes (polygenic)

**Extensive Phenotypic and SNP Data**

phenome.jax.org

**Diet**

Breeders are fed LabDiet® 5K54 (contains 4% fat) and offspring are weaned onto and fed LabDiet® 5K20 (containing 10% fat)

**Pricing, Licensing & Supply Information**

Age	USA/Canada/ Mexico	International
	Female / Male	Female / Male
3-5 weeks	\$148.40	\$193.00
6 weeks	\$151.05	\$196.40
7 weeks	\$153.70	\$199.90
8 weeks	\$156.35	\$203.30
9 weeks	\$159.00	\$206.70
10 weeks	\$161.65	\$210.20
11 weeks	\$164.30	\$213.60
12 weeks	\$166.95	\$217.10

**General Terms & Conditions:**

Notice regarding NONcNZO10/LtJ Female and Male, see the strain data sheet for full details.



## Common Names

SJL, Swiss Jim Lambert

## Appearance

Albino

## MHC Haplotype

$H2^{s2}$

## Research Applications

Aggression

Cancer (Hodgkin's disease, leukemia)

Multiple sclerosis (experimental autoimmune encephalomyelitis, EAE)

Muscle regeneration

Muscular dystrophy

Retinal degeneration

Type 1 diabetes

## Extensive Phenotypic and SNP Data

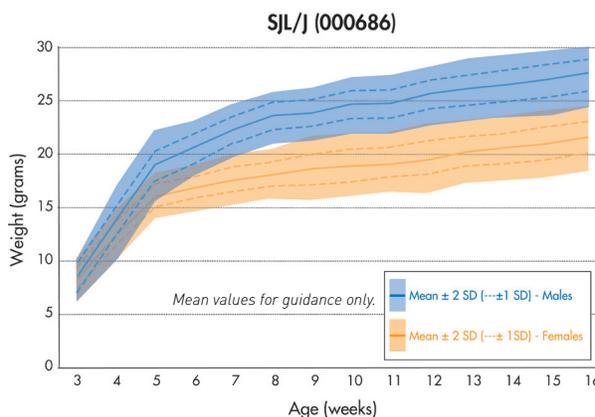
[phenome.jax.org](http://phenome.jax.org)

## Diet

LabDiet® 5K52/5K67 (contains 6% fat)

## Body Weight Data

This weight chart is based on mice from Bar Harbor. ([jaxmice.jax.org/support/weight/000686](http://jaxmice.jax.org/support/weight/000686))



## Pricing, Licensing & Supply Information

Age	USA/Canada/Mexico		International	
	Female	Male	Female	Male
3 weeks	\$30.52	\$28.46	\$39.70	\$37.00
4 weeks	\$32.29	\$29.54	\$42.00	\$38.50
5 weeks	\$36.06	\$32.55	\$46.90	\$42.40
6 weeks	\$37.15	N/A	\$48.30	N/A
7 weeks	\$38.72	N/A	\$50.40	N/A
8 weeks	\$49.02	N/A	\$63.80	N/A
9 weeks	\$51.03	N/A	\$66.40	N/A
10 weeks	\$52.80	N/A	\$68.70	N/A

Volume Pricing is available for this strain.

Learn more [jaxmice.jax.org/strain/000686](http://jaxmice.jax.org/strain/000686)

# 005314 TALLYHO/JngJ



### Common Names

TALLYHO, TH

### Appearance

Albino

### MHC Haplotype

*H2<sup>s</sup>*

### Research Applications

Obesity

Type 2 diabetes (polygenic)

Vascular dysfunctions

### Extensive Phenotypic and SNP Data

[phenome.jax.org](http://phenome.jax.org)

### Diet

LabDiet® 5K52/5K67 (contains 6% fat)

### Pricing, Licensing & Supply Information

Age	USA/Canada/ Mexico	International
	Female / Male	Female / Male
3-5 weeks	\$81.20	\$105.60
6 weeks	\$84.65	\$110.10
7 weeks	\$88.10	\$114.60
8 weeks	\$91.55	\$119.10
9 weeks	\$95.00	\$123.50
10 weeks	\$98.45	\$128.00
11 weeks	\$101.90	\$132.50
12 weeks	\$105.35	\$137.00
13 weeks	\$108.80	\$141.50
14 weeks	\$112.25	\$146.00
15 weeks	\$115.70	\$150.50
16 weeks	\$119.15	\$154.90

**Cryopreserved Embryos** are available for this strain.

[Learn more jaxmice.jax.org/strain/005314](http://jaxmice.jax.org/strain/005314)



### Strain Type

F2 hybrid of C57BL/6J (000664) and 129S1/SvImJ (002448)

### Common Name

B6129SF2

### Appearance

Black: *a/a*

White-bellied agouti: *A<sup>w</sup>/A<sup>w</sup>* or *A<sup>w</sup>/a*

### Research Applications

Approximate control for mixed B6 and 129S (B6;129S) genetic background

Hybrid vigor

### MHC Haplotype

*H2<sup>b</sup>*

### Diet

LabDiet® 5K52/5K67 (contains 6% fat)

### Pricing, Licensing & Supply Information

Age	USA/Canada/ Mexico	International
	Female / Male	Female / Male
3-5 weeks	\$54.80	\$71.30
6 weeks	\$57.45	\$74.70
7 weeks	\$60.10	\$78.20
8 weeks	\$62.75	\$81.60
9 weeks	\$65.40	\$85.10
10 weeks	\$68.05	\$88.50
11 weeks	\$70.70	\$92.00
12 weeks	\$73.35	\$95.40
13 weeks	\$76.00	\$98.80
14 weeks	\$78.65	\$102.30
15 weeks	\$81.30	\$105.70



# 100010 B6C3F1/J



## Strain Type

F1 hybrid of C57BL/6J (000664) and C3H/HeJ (000659)

## Common Name

B6C3

## Appearance

Agouti

## MHC Haplotype

*H2<sup>b/k</sup>*

## Research Applications

Approximate control for mixed B6 and C3H genetic background

Hybrid vigor

Safety studies

Tissue transplant host for either parental strain

Toxicology research

## Extensive Phenotypic and SNP Data

[phenome.jax.org](http://phenome.jax.org)

## Diet

LabDiet® 5K52/5K67 (contains 6% fat)

## Pricing, Licensing & Supply Information

Age	USA/Canada/Mexico		International	
	Female	Male	Female	Male
3-5 weeks	\$24.12	\$22.47	\$31.40	\$29.30
6 weeks	\$26.92	\$25.39	\$35.10	\$33.10
7-8 weeks	\$29.95	\$29.20	\$39.00	\$38.00
9 weeks	\$34.68	\$33.81	\$45.10	\$44.00
10 weeks	\$37.95	\$35.98	\$49.40	\$46.80
11 weeks	\$37.95	\$39.49	\$49.40	\$51.40
12 weeks	\$37.95	\$42.29	\$49.40	\$55.00
13 weeks	\$40.76	\$45.05	\$53.00	\$58.60
14 weeks	\$43.46	\$47.91	\$56.50	\$62.30
15 weeks	\$46.27	\$50.56	\$60.20	\$65.80

Learn more [jaxmice.jax.org/strain/100010](http://jaxmice.jax.org/strain/100010)



## Strain Type

F1 hybrid of C57BL/6J (000664) and CBA/J (000656)

## Common Name

B6CBA

## Appearance

Agouti

## MHC Haplotype

$H2^{b/k}$

## Research Applications

Hybrid vigor

Tissue transplant host for either parental strain

## Extensive Phenotypic and SNP Data

[phenome.jax.org](http://phenome.jax.org)

## Diet

LabDiet® 5K52/5K67 (contains 6% fat)

## Pricing, Licensing & Supply Information

Age	USA/Canada/ Mexico	International
	Female / Male	Female / Male
3-5 weeks	\$29.30	\$38.10
6 weeks	\$31.95	\$41.60
7 weeks	\$34.60	\$45.00
8 weeks	\$37.25	\$48.50
9 weeks	\$39.90	\$51.90
10 weeks	\$42.55	\$55.40
11 weeks	\$45.20	\$58.80
12 weeks	\$47.85	\$62.30
13 weeks	\$50.50	\$65.70
14 weeks	\$53.15	\$69.10
15 weeks	\$55.80	\$72.60



# 100006 B6D2F1/J



## Strain Type

F1 hybrid of C57BL/6J (000664) and DBA/2J (000671)

## Common Name

B6D2

## Appearance

Black

## MHC Haplotype

$H2^{b/d}$

## Research Applications

Hybrid vigor

Safety studies

Tissue transplant host for either parental strain

Toxicology research

## Extensive Phenotypic and SNP Data

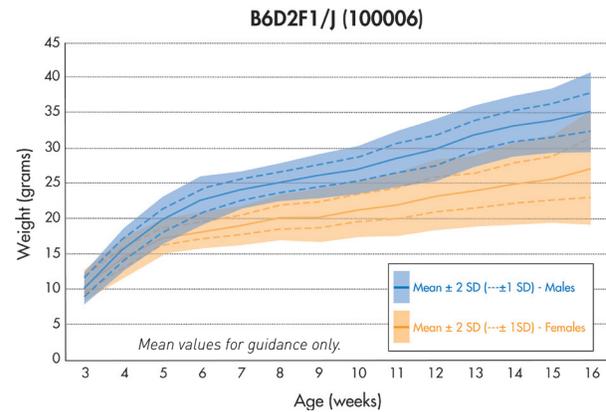
[phenome.jax.org](http://phenome.jax.org)

## Diet

LabDiet® 5K52/5K67 (contains 6% fat)

## Body Weight Data

This weight chart is based on mice from Bar Harbor.  
([jaxmice.jax.org/support/weight/100006](http://jaxmice.jax.org/support/weight/100006))



## Pricing, Licensing & Supply Information

Age	USA/Canada/Mexico		International	
	Female	Male	Female	Male
3-4 weeks	\$22.95	\$21.31	\$29.20	\$27.70
5 weeks	\$23.59	\$22.00	\$30.70	\$28.60
6 weeks	\$26.18	\$24.75	\$34.10	\$32.20
7 weeks	\$29.56	\$26.94	\$38.50	\$35.10
8 weeks	\$31.00	\$28.49	\$40.30	\$37.10
9 weeks	\$32.14	\$29.79	\$41.80	\$38.80
10 weeks	\$34.24	\$34.42	\$44.60	\$44.80
11 weeks	\$34.24	\$35.09	\$44.60	\$45.70
12 weeks	\$36.99	\$38.05	\$48.10	\$49.50

**Volume Pricing** is available for this strain.

Learn more [jaxmice.jax.org/strain/100006](http://jaxmice.jax.org/strain/100006)



### Strain Type

F1 hybrid of C57BL/6J (000664) and SJL/J (000686)

### Common Name

B6SJL

### Appearance

Agouti

### MHC Haplotype

*H2<sup>b/s2</sup>*

### Research Applications

Hybrid vigor

Tissue transplant host for either parental strain

### Extensive Phenotypic and SNP Data

[phenome.jax.org](http://phenome.jax.org)

### Diet

LabDiet® 5K52/5K67 (contains 6% fat)

### Pricing, Licensing & Supply Information

Age	USA/Canada/Mexico		International	
	Female	Male	Female	Male
3-4 weeks	\$23.11	\$20.96	\$30.10	\$27.30
5 weeks	\$23.11	\$21.36	\$30.10	\$27.80
6 weeks	\$25.81	\$23.66	\$33.60	\$30.80
7 weeks	\$27.92	\$26.42	\$36.40	\$34.40
8 weeks	\$29.12	\$29.12	\$37.90	\$37.90
9 weeks	\$33.38	\$29.74	\$43.40	\$38.70
10 weeks	\$37.52	\$34.50	\$48.80	\$44.90
11 weeks	\$39.64	\$34.50	\$51.60	\$44.90
12 weeks	\$39.64	\$34.50	\$51.60	\$44.90
13 weeks	\$42.40	\$37.37	\$55.20	\$48.60
14 weeks	\$45.16	\$40.17	\$58.80	\$52.30
15 weeks	\$48.02	\$42.93	\$62.50	\$55.90

Volume Pricing is available for this strain.



# 100007 CB6F1/J



## Strain Type

F1 hybrid of BALB/cJ (000651) and C57BL/6J (000664)

## Common Name

CB6

## Appearance

Agouti

## MHC Haplotype

*H2<sup>d/b</sup>*

## Research Applications

Hybrid vigor

Safety studies

Tissue transplant host for either parental strain

Toxicology research

## Extensive Phenotypic and SNP Data

[phenome.jax.org](http://phenome.jax.org)

## Diet

LabDiet® 5K52/5K67 (contains 6% fat)

## Pricing, Licensing & Supply Information

Age	USA/ Canada/Mexico		International	
	Female	Male	Female	Male
3-5 weeks	\$23.74	\$21.52	\$30.90	\$28.00
6 weeks	\$29.63	\$27.45	\$38.60	\$35.70
7 weeks	\$29.63	\$27.45	\$38.60	\$35.70
8 weeks	\$29.63	\$30.42	\$38.60	\$39.60
9 weeks	\$32.33	\$30.42	\$42.10	\$39.60
10 weeks	\$34.98	\$32.91	\$45.50	\$42.80
11 weeks	\$34.98	\$32.91	\$45.50	\$42.80
12 weeks	\$34.98	\$35.46	\$45.50	\$46.10
13 weeks	\$34.98	\$35.46	\$45.50	\$46.10
14 weeks	\$34.98	\$38.16	\$45.50	\$49.70
15 weeks	\$34.98	\$40.81	\$45.50	\$53.10

Learn more [jaxmice.jax.org/strain/100007](http://jaxmice.jax.org/strain/100007)



## Strain Type

F1 hybrid between NZB/BINJ (000684) and NZW/LacJ (001058)

## Common Name

NZBW

## Appearance

Agouti

## MHC Haplotype

*H2<sup>d/z</sup>*

## Research Applications

Lupus

Neurobiology (dyslexia)

Tissue transplant host for either parental strain

## Extensive Phenotypic and SNP Data

[phenome.jax.org](http://phenome.jax.org)

## Diet

LabDiet® 5K52/5K67 (contains 6% fat)

## Pricing, Licensing & Supply Information

Age	USA/Canada/Mexico		International	
	Female	Male	Female	Male
3-5 weeks	\$63.10	\$63.10	\$82.10	\$82.10
6 weeks	\$65.75	\$65.75	\$85.50	\$85.50
7 weeks	\$68.40	\$68.40	\$89.00	\$89.00
8 weeks	\$71.05	\$71.05	\$92.40	\$92.40
9 weeks	\$73.70	\$73.70	\$95.90	\$95.90
10 weeks	\$76.35	\$76.35	\$99.30	\$99.30
11 weeks	\$79.00	\$79.00	\$102.70	\$102.70
12 weeks	\$81.65	\$81.65	\$106.20	\$106.20
13 weeks	\$84.30	\$84.30	\$109.60	\$109.60
14 weeks	\$86.95	\$86.95	\$113.10	\$113.10
15 weeks	\$89.60	\$89.60	\$116.50	\$116.50
16 weeks	\$92.25	N/A	\$120.00	N/A
17 weeks	\$94.90	N/A	\$123.40	N/A
18 weeks	\$97.55	N/A	\$126.90	N/A
19 weeks	\$100.20	N/A	\$130.30	N/A
20 weeks	\$102.85	N/A	\$133.80	N/A



# 009376 J:DO

The most genetically diverse outbred mouse resource available



### Common Name

Diversity Outbred

### Appearance

Multiple coat colors

### MHC Haplotype

Varied

### Research Applications

- Compound evaluation
- Drug resistance or behavioral phenotypes
- High resolution genetic mapping
- QTL validation of disease susceptibility
- Toxicogenomic screens

### Extensive Phenotypic and SNP Data

[phenome.jax.org](http://phenome.jax.org)

### Diet

LabDiet® 5K52/5K67 (contains 6% fat)

### Pricing, Licensing & Supply Information

Age	USA/Canada/ Mexico	International
	Female / Male	Female / Male
Individual Mouse	\$52.00	\$67.60

See the Pricing and Purchasing tab of the strain data sheet for the 2015-16 Breeding Wave Schedule.





### Strain Type

Chemically-induced Mutation, Coisogenic

### Common Name

Apc Min

### Appearance

Black

### MHC Haplotype

H2<sup>b</sup>

### Research Applications

Cancer (intestinal, breast)

Stem cell research, hematopoietic, cancer stem cells

### Diet

Breeders are fed LabDiet® 5K54 (contains 4% fat) and offspring are weaned onto and fed LabDiet® 5K20 (contains 10% fat)

### Pricing, Licensing & Supply Information

	USA/Canada/ Mexico	International
	Heterozygous for <i>Apc</i> <sup>Min</sup>	Heterozygous for <i>Apc</i> <sup>Min</sup>
Age	Female / Male	Female / Male
5 weeks	\$278.90	\$362.60
6 weeks	\$284.35	\$369.70
7 weeks	\$289.80	\$376.80
8 weeks	\$295.25	\$383.90
Pairs	C57BL/6J (000664) x Heterozygous for <i>Apc</i> <sup>Min</sup>	C57BL/6J (000664) x Heterozygous for <i>Apc</i> <sup>Min</sup>
	\$308.25	\$400.80
	Wild-type for <i>Apc</i> <sup>Min</sup> x Heterozygous for <i>Apc</i> <sup>Min</sup>	Wild-type for <i>Apc</i> <sup>Min</sup> x Heterozygous for <i>Apc</i> <sup>Min</sup>
	\$358.35	\$465.90

**Control:** 000664 C57BL/6J; Wild-type from the colony



# 002052 B6.129P2-*Apoe*<sup>tm1Unc</sup>/J



## Strain Type

Targeted Mutation (Knockout), Congenic

## Common Name

ApoE knockout

## Appearance

Black

## MHC Haplotype

H2<sup>b</sup>

## Research Applications

Atherosclerosis  
Behavior and learning defects  
Cardiovascular research  
Hearing defects  
Lipid metabolism

## Part of our unique patented Genetic Stability Program

[jaxmice.jax.org/gsp](http://jaxmice.jax.org/gsp)



## Extensive Phenotypic and SNP Data

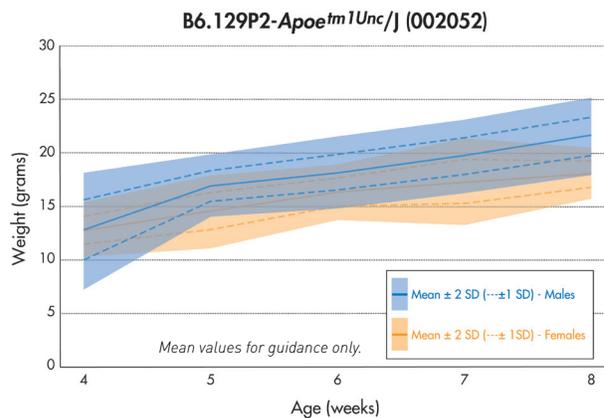
[phenome.jax.org](http://phenome.jax.org)

## Diet

LabDiet® 5K52/5K67 (contains 6% fat)

## Body Weight Data

This weight chart is based on mice from Bar Harbor.  
([jaxmice.jax.org/support/weight/002052](http://jaxmice.jax.org/support/weight/002052))



## Pricing, Licensing & Supply Information

Age	USA/Canada/Mexico		International	
	Female	Male	Female	Male
3-9 weeks	\$104.25	\$105.85	\$135.60	\$137.70
10-12 weeks	\$116.50	\$114.80	\$151.50	\$149.30
13 weeks	\$125.05	\$123.35	\$162.60	\$160.40
14 weeks	\$130.25	\$128.40	\$169.40	\$167.00
15 weeks	\$135.10	\$133.45	\$175.70	\$173.50

**Control:** 000664 C57BL/6J

**Volume Pricing** is available for this strain.

Learn more [jaxmice.jax.org/strain/002052](http://jaxmice.jax.org/strain/002052)



### Strain Type

Inbred Strain, Spontaneous Mutation

### Common Name

CBA/N

### Appearance

Agouti

### MHC Haplotype

H2<sup>k</sup>

### Research Applications

Colitis

Immunodeficiency (B cell defects)

Immunology

Inflammation

### Extensive Phenotypic and SNP Data

[phenome.jax.org](http://phenome.jax.org)

### Diet

LabDiet® 5K52/5K67 (contains 6% fat)

### Pricing, Licensing & Supply Information

	USA/Canada/ Mexico	International
	Homozygous for <i>Btk</i> <sup>xid</sup>	Homozygous for <i>Btk</i> <sup>xid</sup>
<b>Age</b>	<b>Female</b>	<b>Female</b>
3-5 weeks	\$71.10	\$92.50
6 weeks	\$73.75	\$95.90
7 weeks	\$76.40	\$99.40
8 weeks	\$79.05	\$102.80
9 weeks	\$81.70	\$106.30
	Hemizygous for <i>Btk</i> <sup>xid</sup>	Hemizygous for <i>Btk</i> <sup>xid</sup>
<b>Age</b>	<b>Male</b>	<b>Male</b>
3-5 weeks	\$71.10	\$92.50
6 weeks	\$73.75	\$95.90
7 weeks	\$76.40	\$99.40
8 weeks	\$79.05	\$102.80
9 weeks	N/A	N/A

**Controls:** 000654 CBA/CaJ (approximate); Please refer to the strain data sheet for detailed control information.



**001801** C57BL/10ScSn-*Dmd*<sup>mdx</sup>/J**Strain Type**

Spontaneous Mutation, Coisogenic

**Common Name**

mdx

**Appearance**

Black

**MHC Haplotype***H2<sup>b</sup>***Research Applications**

Muscular dystrophy

Neurobiology

Sensorineural (cataracts)

**Extensive Phenotypic and SNP Data**

phenome.jax.org

**Diet**

LabDiet® 5K52/5K67 (contains 6% fat)

**Pricing, Licensing & Supply Information**

	<b>USA/Canada/ Mexico</b>	<b>International</b>
	<b>Female,</b> Homozygous for <i>Dmd</i> <sup>mdx</sup>	<b>Female,</b> Homozygous for <i>Dmd</i> <sup>mdx</sup>
	<b>Male,</b> Hemizygous for <i>Dmd</i> <sup>mdx</sup>	<b>Male,</b> Hemizygous for <i>Dmd</i> <sup>mdx</sup>
Age		
4-5 weeks	\$107.20	\$139.40
6 weeks	\$110.65	\$143.90
7 weeks	\$114.10	\$148.40
8 weeks	\$117.55	\$152.90
9 weeks	\$121.00	\$157.30
10 weeks	\$124.45	\$161.80

**Controls:** 000476 C57BL/10ScSnJ; 000666 C57BL/10SnJ**Learn more** [jaxmice.jax.org/strain/001801](http://jaxmice.jax.org/strain/001801)



**Strain Type**

Spontaneous Mutation

**Common Name**

MRL/*lpr*

**Appearance**

albino

**MHC Haplotype**

*H2*<sup>k</sup>

**Research Applications**

- Abnormal T cell development and function
- Autoimmune Lymphoproliferative Syndrome (ALPS)
- Autoimmunity
- Immune complex glomerulonephritis
- Inflammation
- Lupus
- Rheumatoid arthritis
- Sjögren Syndrome

**Extensive Phenotypic and SNP Data**

[phenome.jax.org](http://phenome.jax.org)

**Diet**

LabDiet® 5K52/5K67 (contained 6% fat)

**Pricing, Licensing & Supply Information**

	USA/Canada/ Mexico	International
	Homozygous for <i>Fas</i> <sup>lpr</sup>	Homozygous for <i>Fas</i> <sup>lpr</sup>
Age	Female / Male	Female / Male
3-5 weeks	\$106.40	\$138.40
6 weeks	\$110.71	\$144.00
7 weeks	\$115.03	\$149.60
8 weeks	\$119.34	\$155.20

**Controls:** 000486 MRL/MpJ



**000457** B10.RIII-*H2<sup>r</sup>* *H2-T18<sup>b</sup>*/(71NS)SnJ**Strain Type**

Major Histocompatibility Congenic

**Common Name**

B10.RIII

**Appearance**

Black

**MHC Haplotype***H2<sup>r</sup>***Research Applications**

Autoimmunity

Immunology

Inflammation

Multiple sclerosis (experimental autoimmune encephalomyelitis, EAE)

Rheumatoid arthritis

**Diet**

LabDiet® 5K52/5K67 (contains 6% fat)

**Pricing, Licensing & Supply Information**

	USA/Canada/ Mexico	International
	Homozygous for <i>H2<sup>r</sup></i> , Homozygous for <i>H2-T18<sup>b</sup></i>	Homozygous for <i>H2<sup>r</sup></i> , Homozygous for <i>H2-T18<sup>b</sup></i>
Age	Female / Male	Female / Male
3-5 weeks	\$73.30	\$95.30
6 weeks	\$76.61	\$99.60
7 weeks	\$79.93	\$104.00
8 weeks	\$83.24	\$108.30

**Controls:** 000666 C57BL/10SnJLearn more [jaxmice.jax.org/strain/000457](http://jaxmice.jax.org/strain/000457)



## Strain Type

Spontaneous Mutation , Congenic

## Common Names

*Lep<sup>ob</sup>*, *ob*, Obese, B6-*ob/ob*

## Appearance

Homozygous: Black, fat

Heterozygous: Black, lean

## MHC Haplotype

H2<sup>b</sup>

## Research Applications

Cardiovascular defects

Endocrine defects (hypothalamus, pituitary, pancreas)

Hyperphagia

Infertility

Metabolic syndrome

Obesity

Thermoregulation

Type 2 diabetes (transient)

Wound healing

## Extensive Phenotypic and SNP Data

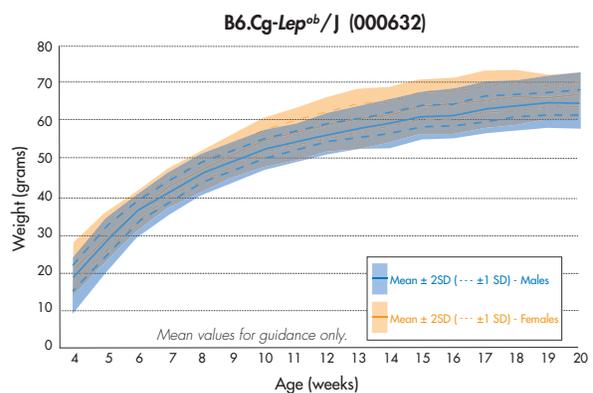
phenome.jax.org

## Diet

LabDiet® 5K20 (contains 10% fat)

## Body Weight Data

This weight chart is based on mice from Bar Harbor.  
(jaxmice.jax.org/support/weight/000632)



## Pricing, Licensing & Supply Information

Age	USA/Canada/Mexico		International	
	Female	Male	Female	Male
Heterozygous for <i>Lep<sup>ob</sup></i>				
4-5 weeks	\$120.73	\$120.73	\$157.00	\$157.00
6-8 weeks	\$130.22	\$129.43	\$169.30	\$168.30
9-10 weeks	\$139.66	\$140.13	\$181.60	\$182.20
Homozygous for <i>Lep<sup>ob</sup></i>				
4-5 weeks	\$126.41	\$125.66	\$164.40	\$163.40
6-8 weeks	\$130.22	\$129.43	\$169.30	\$168.30
9-10 weeks	\$139.66	\$140.13	\$181.60	\$182.20

**Controls:** Heterozygote from the colony; Untyped from the colony; 000664 C57BL/6J

**Volume Pricing** is available for this strain.

# 000697 B6.BKS(D)-*Lepr<sup>db</sup>*/J



## Strain Type

Spontaneous Mutation; Congenic

## Common Names

B6-db, B6-db/db

## Appearance

Homozygous: Black, fat

Heterozygous: Black, lean

## MHC Haplotype

*H2<sup>b</sup>*

## Research Applications

Cardiovascular defects

Endocrine defects

Hematopoiesis

Immunology

Infertility

Lipid homeostasis

Metabolism

Obesity

Respiratory system defects

Type 2 diabetes (transient)

Wound healing

## Extensive Phenotypic and SNP Data

[phenome.jax.org](http://phenome.jax.org)

## Diet

LabDiet® 5K52/5K67 (contains 6% fat)

## Pricing, Licensing & Supply Information

Age	USA/Canada/ Mexico		International	
	Female	Male	Female	Male
Homozygous for <i>Lepr<sup>db</sup></i>				
4-5 weeks	\$139.40	\$142.40	\$181.30	\$185.20
6 weeks	\$143.71	\$146.71	\$186.90	\$190.80
7 weeks	\$148.03	\$151.03	\$192.50	\$196.40
8 weeks	\$152.34	\$155.34	\$198.10	\$202.00
9 weeks	\$156.65	\$159.65	\$203.70	\$207.60
10 weeks	\$160.96	\$163.96	\$209.30	\$213.20
Heterozygous for <i>Lepr<sup>db</sup></i>				
4-5 weeks	\$104.83	\$104.83	\$136.30	\$136.30
6 weeks	\$111.21	\$111.21	\$144.60	\$144.60
7 weeks	\$115.53	\$115.53	\$150.20	\$150.20
8 weeks	\$119.84	\$119.84	\$155.80	\$155.80
9 weeks	\$124.15	\$124.15	\$161.40	\$161.40
10 weeks	\$128.46	\$128.46	\$167.10	\$167.10

**Controls:** 000664 C57BL/6J; Heterozygous from the colony



### Strain Type

Spontaneous Mutation, Congenic

### Common Names

diabetic, BKS-*db/db*, BKS-*db*

### Appearance

Homozygous for *Lepr<sup>db</sup>*: Black, fat

Heterozygous for *Lepr<sup>db</sup>*: Black, lean

Homozygous for *Dock7<sup>m</sup>*: Misty (grey), lean

### MHC Haplotype

*H2<sup>d</sup>*

### Extensive Phenotypic and SNP Data

[phenome.jax.org](http://phenome.jax.org)

### Diet

LabDiet® 5K52/5K67 (contains 6% fat)

### Research Applications

Cardiovascular defects

Endocrine defects (pancreas, hypothalamus and pituitary)

Infertility

Metabolism

Obesity

Renal defects

Thermoregulation

Type 2 diabetes

Wound healing immunology

# 000642 BKS.Cg-*Dock7<sup>m</sup>* +/- *Lepr<sup>db</sup>*/J

## Pricing, Licensing & Supply Information

Age	USA/Canada/Mexico		International	
	Female / Male	Female / Male	Female / Male	Female / Male
	Heterozygous for <i>Lepr<sup>db</sup></i> , Heterozygous for <i>Dock7<sup>m</sup></i>		Heterozygous for <i>Lepr<sup>db</sup></i> , Heterozygous for <i>Dock7<sup>m</sup></i>	
4 weeks	\$87.61	\$87.61	\$113.90	\$113.90
5 weeks	\$91.58	\$91.58	\$119.10	\$119.10
6 weeks	\$95.61	\$95.61	\$124.30	\$124.30
7 weeks	\$99.59	\$99.59	\$129.50	\$129.50
8 weeks	\$99.59	\$103.51	\$129.50	\$134.60
9 weeks	\$106.74	\$106.74	\$138.80	\$138.80
10 weeks	\$110.77	\$110.77	\$144.10	\$144.10
	Homozygous for <i>Lepr<sup>db</sup></i>		Homozygous for <i>Lepr<sup>db</sup></i>	
	Homozygous for <i>Dock7<sup>m</sup></i>		Homozygous for <i>Dock7<sup>m</sup></i>	
Age	Female	Male	Female	Male
4 weeks	\$120.05	\$123.23	\$156.10	\$160.20
5 weeks	\$123.97	\$127.20	\$161.20	\$165.40
6 weeks	\$127.94	\$131.18	\$166.40	\$170.60
7-8 weeks	\$131.97	\$135.04	\$171.60	\$175.60
9 weeks	\$135.84	\$139.18	\$176.60	\$181.00
10 weeks	\$139.81	\$143.10	\$181.80	\$186.10
Pairs	Heterozygous for <i>Lepr<sup>db</sup></i> , Heterozygous for <i>Dock7<sup>m</sup></i> x Heterozygous for <i>Lepr<sup>db</sup></i> , Heterozygous for <i>Dock7<sup>m</sup></i>		Heterozygous for <i>Lepr<sup>db</sup></i> , Heterozygous for <i>Dock7<sup>m</sup></i> x Heterozygous for <i>Lepr<sup>db</sup></i> , Heterozygous for <i>Dock7<sup>m</sup></i>	
	\$191.22		\$248.60	

**Controls:** *Dock7<sup>m</sup>* +/- *Lepr<sup>db</sup>* (Heterozygote from the colony); *Dock7<sup>m</sup>* +/- *Dock7<sup>m</sup>* + from the colony; 000662 C57BLKS/J

**Volume Pricing** is available for this strain.



### Strain Type

Targeted Mutation (Knockout), Congenic

### Common Names

*Ldlr* knockout, *Ldlr* -/-

### Appearance

Black

### MHC Haplotype

*H2<sup>b</sup>*

### Research Applications

Atherosclerosis

Diet-induced obesity

Hypercholesterolemia

Lipid metabolism

Metabolic syndrome

### Diet

LabDiet® 5K52/5K67 (contains 6% fat)

### Pricing, Licensing & Supply Information

	USA/Canada/ Mexico	International
	Homozygous for <i>Ldlr</i> <sup>tm1Her</sup>	Homozygous for <i>Ldlr</i> <sup>tm1Her</sup>
Age	Female / Male	Female / Male
3-5 weeks	\$114.00	\$148.20
6 weeks	\$119.45	\$155.30
7 weeks	\$124.90	\$162.40
8 weeks	\$130.35	\$169.50
9 weeks	\$135.80	\$176.60
10 weeks	\$141.25	\$183.70
11 weeks	\$146.70	\$190.80
12 weeks	\$152.15	\$197.80
13 weeks	\$157.60	\$204.90

**Controls:** 000664 C57BL/6J



# 002014 B6.SJL-*Ptprc*<sup>a</sup>*Pepc*<sup>b</sup>/BoyJ



## Strain Type

Spontaneous Mutation; Congenic

## Common Names

Pep Boy, B6 CD45.1 (Ly5.1)

## Appearance

Black

## MHC Haplotype

*H2<sup>b</sup>*

## Research Applications

Antigen receptors

B cell-specific markers

CD45 antigens

Tissue and cell markers

Transplant studies

## Diet

LabDiet® 5K52/5K67 (contains 6% fat)

## Pricing, Licensing & Supply Information

Age	USA/Canada/ Mexico		International	
	Female	Male	Female	Male
3-4 weeks	\$51.10	\$53.14	\$66.50	\$69.10
5 weeks	\$54.17	\$53.14	\$70.50	\$69.10
6 weeks	\$56.71	\$55.64	\$73.80	\$72.40
7 weeks	\$59.10	\$57.98	\$76.90	\$75.40
8 weeks	\$61.59	\$60.42	\$80.10	\$78.60
9 weeks	\$64.02	\$62.82	\$83.30	\$81.70
10 weeks	\$66.57	\$66.57	\$86.60	\$86.60
11 weeks	\$68.90	N/A	\$89.60	N/A

**Controls:** 000664 C57BL/6J

**Volume Pricing** is available for this strain.

**Cryopreserved Embryos** are available for this strain.



## Strain Type

Transgenic; Congenic

## Common Name

DO11.10

## Appearance

Albino

## MHC Haplotype

*H2<sup>d</sup>*

## Research Applications

Immune tolerance and autoimmunity

Rearranged TCR transgene to OVA

T cell function and development

## Diet

LabDiet® 5K52/5K67 (contains 6% fat)

## Pricing, Licensing & Supply Information

Age	USA/Canada/ Mexico	International
	Female / Male	Female / Male
3-5 weeks	124.30	161.60
6 weeks	129.75	168.70
7 weeks	135.20	175.80
8 weeks	140.65	182.90
9 weeks	146.10	190.00
10 weeks	151.55	197.10
11 weeks	157.00	204.10
12 weeks	162.45	211.20

**Controls:** 000651 BALB/cJ



# 006494 B6CBA-Tg(HDexon1)62Gpb/3J



## Strain Type

Transgenic

## Common Names

HD or R6/2 line

## Appearance

Black: *a/a*

Black: ataxic, tremors

Agouti: *A/?*

Agouti: ataxic, tremors

## MHC Haplotype

*H2<sup>b</sup>*, *H2<sup>b/k</sup>* or *H2<sup>k</sup>*

## Research Applications

Huntington's disease (HD)

Infertility

Neurobiological (ataxia, behavior, learning, neurodegeneration, seizures)

## Diet

LabDiet® 5K52/5K67 (contains 6% fat)

## Pricing, Licensing & Supply Information

	USA/Canada/ Mexico	International
	Hemizygous for Tg(HDexon1)62Gpb	Hemizygous for Tg(HDexon1)62Gpb
Age	Female / Male	Female / Male
5 weeks	\$292.80	\$380.70
6 weeks	\$298.25	\$387.80
7 weeks	\$303.70	\$394.90
8 weeks	\$309.15	\$401.90
Pairs	Hemizygous for Tg(HDexon1)62Gpb (ovary transplant) x B6CBAF1/J (100011)	Hemizygous for Tg(HDexon1)62Gpb (ovary transplant) x B6CBAF1/J (100011)
	\$337.71	\$439.10

**Controls:** Noncarrier from the colony

**General Terms & Conditions:** Use of MICE by companies or for-profit entities requires a license prior to shipping, see the strain data sheet for full details.



## Strain Type

Transgenic

## Common Name

SOD1

## Appearance

Multiple coat colors

## MHC Haplotype

$H2^b$ ,  $H2^{b/s2}$  or  $H2^s2$

## Research Applications

ALS or Lou Gehrig's Disease (neuromuscular degeneration, paralysis, motor neuron loss)

Early mortality

Metabolic defects

## Working with ALS Mice Resource Manual

Extensive colony details and maintenance data.  
Download the pdf at [jaxmice.jax.org/manual](http://jaxmice.jax.org/manual)

## Diet

LabDiet® 5K52/5K67 (contains 6% fat)

## Pricing, Licensing & Supply Information

	USA/Canada/ Mexico	International
	Hemizygous for Tg(SOD1*G93A)1Gur	Hemizygous for Tg(SOD1*G93A)1Gur
Age	Female / Male	Female / Male
5 weeks	\$269.90	\$350.90
6 weeks	\$275.35	\$358.00
7 weeks	\$280.80	\$365.10
8 weeks	\$286.25	\$372.20
9 weeks	\$291.70	\$379.30
10 weeks	\$297.15	\$386.30
Pairs	B6SJLF1/J (100012) x Hemizygous for Tg(SOD1*G93A)1Gur \$301.16	B6SJLF1/J (100012) x Hemizygous for Tg(SOD1*G93A)1Gur \$391.60

**Controls:** Noncarrier from the colony;  
002297 B6SJL-Tg(SOD1)2Gur/J

**General Terms & Conditions:** Use of MICE by companies or for-profit entities requires a license, see the strain data sheet for full details.



# 004194 B6.Cg-Tg(TcraTcrb)425Cbn/J



## Strain Type

Transgenic, Congenic

## Common Names

OT-2, OT-II, OT-II alphabeta TCR, OT-II.2, OT2, OTII, OTII TCR, TCR

## Appearance

Black

## MHC Haplotype

*H2<sup>b</sup>*

## Research Applications

Immunology

*In vivo* T cell biology (TCR-ligand interactions, T cell receptor signaling, T cell activation, thymic selection, antigen presentation, T cell tolerance and induction)

Lymphocyte homing, vaccine development

Rearranged TCR transgene to OVA

## Diet

LabDiet® 5K52/5K67 (contains 6% fat)

## Pricing, Licensing & Supply Information

Age	USA/Canada/ Mexico	International
	Female / Male	Female / Male
3-5 weeks	\$159.80	\$207.80
6 weeks	\$165.25	\$214.90
7 weeks	\$170.70	\$222.00
8 weeks	\$176.15	\$229.00
9 weeks	\$181.60	\$236.10
10 weeks	\$187.05	\$243.20
11 weeks	\$192.50	\$250.30
12 weeks	\$197.95	\$257.40
13 weeks	\$203.40	\$264.50
14 weeks	\$208.85	\$271.60
15 weeks	\$214.30	\$278.60

**Controls:** 000664 C57BL/6J

**Cryopreserved Embryos** are available for this strain.

Learn more [jaxmice.jax.org/strain/004194](http://jaxmice.jax.org/strain/004194)



## Strain Type

Congenic

## Common Names

Thy1<sup>a</sup>, Thy1.1, B6 Thy1.1 (CD90.1)

## Appearance

Black

## MHC Haplotype

H2<sup>b</sup>

## Research Applications

Antigen receptors

T cell-specific surface markers

Thy1 (CD90) antigens

Tissue and cell markers

Transplant studies

## Diet

LabDiet® 5K54 (contains 4% fat)

## Pricing, Licensing & Supply Information

Age	USA/Canada/Mexico		International	
	Female 1-7 Mice	Female 8 + Mice	Female 1-7 Mice	Female 8 + Mice
3-5 weeks	\$93.00	\$55.19	\$120.90	\$71.74
6 weeks	\$96.31	\$57.15	\$125.21	\$74.30
7 weeks	\$99.63	\$59.12	\$129.51	\$76.86
8 weeks	\$102.94	\$61.09	\$133.82	\$79.41
9 weeks	\$106.25	\$63.05	\$138.13	\$81.97
10 weeks	\$109.56	\$65.02	\$142.43	\$84.52
Age	Male 1-7 Mice	Male 8 + Mice	Male 1-7 Mice	Male 8 + Mice
3-5 weeks	\$93.00	\$55.19	\$120.90	\$71.74
6 weeks	\$96.31	\$57.15	\$125.21	\$74.30
7 weeks	\$99.63	\$59.12	\$129.51	\$76.86
8 weeks	\$102.94	\$61.09	\$133.82	\$79.41
9 weeks	N/A	N/A	N/A	N/A
10 weeks	N/A	N/A	N/A	N/A

**Controls:** 000664 C57BL/6J

**Cryopreserved Embryos** are available for this strain.



# 000058 B6(Cg)-*Tyr*<sup>c-2J</sup>/J



## Strain Type

Spontaneous Mutation; Coisogenic

## Common Names

B6 Albino, Albino B6

## Appearance

Albino

## MHC Haplotype

*H2<sup>b</sup>*

## Research Applications

Albinism

Dermatology

Eye physiology defects

Gene targeting

General purpose strain

Glaucoma

Retinal degeneration

Tyrosine negative phenotypes

## Extensive Phenotypic and SNP Data

[phenome.jax.org](http://phenome.jax.org)

## Diet

LabDiet® 5K52/5K67 (contains 6% fat)

## Pricing, Licensing & Supply Information

	USA/Canada/ Mexico	International
	Homozygous for <i>Tyr</i> <sup>c-2J</sup>	Homozygous for <i>Tyr</i> <sup>c-2J</sup>
Age	Female / Male	Female / Male
3-5 weeks	\$29.69	\$38.60
6 weeks	\$32.34	\$42.10
7 weeks	\$34.84	\$45.30
8 weeks	\$37.60	\$48.90
9 weeks	\$40.09	\$52.20
10 weeks	\$42.69	\$55.50
11 weeks	\$45.40	\$59.10
12 weeks	\$48.05	\$62.50

**Controls:** 000664 C57BL/6J

**Cryopreserved Embryos** are available for this strain.

**JAX® mES Cells** are available from this strain, page 87.

**JAX® Morula** is available from this strain, page 88.

## Support for Biomedical and Drug Discovery Research

The Jackson Laboratory offers an innovative suite of services built on our strong foundation of scientific excellence in mouse biology, genetics, and models of human disease. Our experience and specialized knowledge ensures the highest level of accuracy, reproducibility, and consistency for your preclinical drug development and biomedical research.

### **Our cutting-edge and highly customizable services are available in the following areas:**

Surgical & Preconditioned Models

Breeding, Speed Expansion & Rederivation

Cryopreservation, Storage & Recovery

Genome Science

*In Vivo* Pharmacology

# Surgical & Preconditioned Models

## Aged Mice

Study-ready aged C57BL/6J males are available between 25-72 weeks of age. Contact Customer Service for pricing information or subscribe to JAX® Mice eNews at [jaxmice.jax.org/news](http://jaxmice.jax.org/news) for biweekly inventory reports and pricing. Customized aged mice services are available if larger quantities, alternative strains, or specialty diets are required.

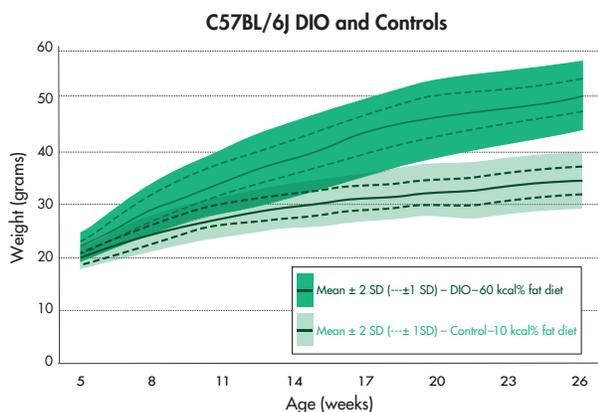
## Inventoried DIO Mice

C57BL/6J DIO mice (380050) are the *gold standard* for diet-induced obesity (DIO) research. Study-ready C57BL/6J DIO mice on high-fat diet are readily available at 6-30 weeks of age. Subscribe to JAX® Mice eNews for a regular inventory report at [jaxmice.jax.org/news](http://jaxmice.jax.org/news).

For pricing, phenotype data, care and use information, and protocols, visit [jaxmice.jax.org/diomice](http://jaxmice.jax.org/diomice).

## Custom DIO Mice

Diet-induced obese (DIO) mice can be produced using the standard C57BL/6J model or any other strain susceptible to developing diet-induced obesity. Our Project Managers will work with you to design an experimental protocol that best meets your research needs, including: selection of mouse strain, gender, study diet, control diet, housing density, length of feeding protocol, frequency of weighing, and biospecimen collection.



## Surgical Procedures

Our expert surgeons perform a wide variety of standard and custom surgical procedures to meet even the most demanding research requirements. All surgeries are performed within surgical suites in a barrier facility. Procedures can be customized to suit project needs. View surgical service options and pricing at [jaxmice.jax.org/preconditioned/surgical](http://jaxmice.jax.org/preconditioned/surgical).

## STZ-induced Diabetes

Preconditioned mice are available with streptozotocin (STZ) treatment for type 1 diabetes research. This preconditioning service is based on a multiple low dose STZ injection protocol developed and tested at The Jackson Laboratory. For strain options, pricing and protocol information visit [jaxmice.jax.org/preconditioned/stz](http://jaxmice.jax.org/preconditioned/stz).

## Timed Pregnant Mice

Study-ready timed pregnant female mice are available from select JAX® Mice strains. For more information and pricing visit [jaxmice.jax.org/preconditioned/timedpregnant](http://jaxmice.jax.org/preconditioned/timedpregnant).



Learn more [jaxmice.jax.org/preconditioned](http://jaxmice.jax.org/preconditioned)

# Breeding & Rederivation Services

Our breeding and colony management services can save you time, space, and money, while simplifying all aspects of managing your mouse colonies. Our knowledgeable staff and unrivaled expertise in mouse breeding and colony management can assist you with accomplishing even the most challenging projects. Mice can be shipped directly to you or to our *In Vivo* Pharmacology Services lab where we can conduct your study.

## Breeding, Speed Expansion & Rederivation Services

We can breed and maintain any mouse model, starting with your mouse strains, JAX® Mice, or both, and ship mice directly to you. Whether your objective is to relieve capacity constraints at your facility, rederive mice to improve the health of your colonies, accelerate your colony build, or gain assistance with complex, multiple gene crossbreeding projects, we can provide you with cohorts of study-ready mice when you need them.

Our mouse colonies are housed in high health status barrier rooms in both our Bar Harbor, Maine and Sacramento, California facilities. Weekly cage prices include animal health testing, animal room technician time, project management, and regular colony communication and reporting. We can also perform projects that require housing mice in flexible film isolators.

## Pricing for Barrier Room Production & Colony Maintenance

All strains coming to The Jackson Laboratory for breeding in our Specified and Opportunistic Pathogen Free (SOPF) barrier rooms will be rederived or recovered from cryopreserved sperm or embryos to ensure a high health status.

Description	Standard
Typing Breeder Cage	\$16.15
Non-Typing Breeder Cage	\$15.00
Holding Cage <i>(Typing or Non-Typing, per week)</i>	\$15.00
Holding Box <i>(Double sized cages; Typing or Non-Typing, per week)</i>	\$30.00

Preferred pricing is available up to 7% off for large volume individual projects. Please inquire for details.

## Why Choose JAX® Breeding, Speed Expansion & Rederivation Services?

### Expertise

Unrivaled experience breeding and managing genetically modified mice.

Areas of particular expertise include: Cre mice, neurodegenerative models, hemophilia, rare diseases, aging, and metabolic models.

Experienced staff bring unrivaled genetic, veterinary pathology, and colony and project management expertise to your project.

### Cost-Effective

Outsourcing frees up your limited space and technician time.

Economical barrier cage housing at the maximal health status.

### Customizable

Each project follows a customized plan to optimally meet your requirements.

### Comprehensive

Continuum of integrated services, including blood and tissue collection, genotyping, surgery, histopathology, and compound efficacy testing.

### Fast

Accelerate your breeding project by 3 to 6 months or more, using our IVF rederivation and colony speed expansion services.

Flexible film isolators at our Sacramento, Calif. facility for parallel use while building barrier colonies.

### Quality

No health worries—receive Specified and Opportunistic Pathogen Free (SOPF) mice.

Proven success with delivering projects on schedule and within budget.

### Customer-Centric

An experienced project manager will be dedicated to design and manage your project.

We manage the colony so you don't have to and provide you with regular updates.

JAX Colony Management enables 24/7 on line access to your colony information.



# Breeding & Rederivation Services

## JAX Colony Management

Our recently launched JAX Colony Management, an intuitive and powerful online project management tool to efficiently and effectively manage mouse colonies housed at JAX, allows you to collaborate with staff and view reports on key metrics to make better decisions to move your research projects forward.

### Pricing for Isolator Production & Colony Maintenance

Mouse strains coming to The Jackson Laboratory that are free of a defined subset of pathogens ([jaxmice.jax.org/genetichealth/health\\_program](http://jaxmice.jax.org/genetichealth/health_program)) can be moved directly into our isolator breeding facilities without having to be rederived.

Description	Standard
Typing Cages	\$20.90 <i>per pen/wk</i>
Non-Typing Cages	\$19.00 <i>per pen/wk</i>
Isolator Use Fee*	\$100.00 <i>per iso/wk</i>
Importation Fee	\$1,700.00 <i>per event</i>
Importation Fee	\$52.00 <i>per mouse</i>

\* Includes health monitoring

## Special Diets

We can feed mice special diets to meet your specific research requirements.

### Cage Pricing for Special Diets

Breeder and holding cage pricing are also used for mice maintained on special diets, please inquire for price.

## Aging Services

In some mouse models, a disease condition develops only with age. Our service will maintain your research strain or any JAX® Mice strain, and deliver mice to you at ages appropriate for your projects. We also have study-ready aged mice available (see the Surgical & Preconditioned Models section on page 71).

### Pricing for Aging Services

We will optimize the cage density to provide you the best value to achieve your research objectives and will hold mice until your specific endpoint. Price reductions are offered for long-term aging studies. Please inquire at [jaxservices@jax.org](mailto:jaxservices@jax.org).

## Dedicated Supply of JAX® Mice

Due to the extensive breadth of strains exclusively distributed by The Jackson Laboratory, many strains are available only from our cryopreserved repository or from small colonies in limited quantities. You can save money and time by having us establish a dedicated colony to supply mice that meet your specific requirements for quantity, age, genotype, and gender. You will receive the mice you need when you need them.

Pricing for this service varies by strain and is a function of:

- Cost of original breeders and replacement breeders.
- Strain breeding characteristics.
- Housing costs (breeder cages and holding cages).
- Quantity of mice to be shipped per month.
- Age range of mice to be shipped per month (price is lowest for a 3 week age span).
- Sex of mice to be shipped (price is lowest when both sexes are desired).
- Genotyping expense (if needed).

## Speed Expansion

We are unsurpassed in our expertise, experience and capability in using IVF to generate cohorts of SOPF mice. This service leverages our IVF expertise and the excellent availability of our *gold standard* JAX® Mice to expand breeding colonies quickly and cost-effectively. It is particularly useful for producing large quantities of age-matched mice and takes considerably less time (often saving 6 to 9 months or longer) compared to standard colony expansion techniques. This service is ideal for rapidly building colonies for breeding instead of continuously maintaining costly colonies. Speed Expansion typically works by combining the sperm from a small number of carrier males with the oocytes collected from wild-type inbred female mice. Each year we generate tens of thousands of mice from IVF to accelerate research around the world.

### Pricing for Speed Expansion

Please inquire for pricing and feasibility of specific projects [jaxservices@jax.org](mailto:jaxservices@jax.org).

# Breeding & Rederivation Services

## Speed Congenic Development

Our Speed Congenic Development service accelerates the creation of congenic strains through a marker-assisted breeding strategy, thereby producing a research model faster (Figure 1), while simultaneously reducing your expenses related to using vivarium space, equipment, and personnel costs at your facility. It also reduces the total number of mice needed to generate a congenic strain.

This service facilitates the accelerated transfer of genetic mutations or knockouts from one genetic background to another. Such transfers are typically made to reduce background effects, enhance the phenotype, or improve the vigor (e.g., survival, breeding performance, general health, etc.) of models of disease. Traditional congenic development is a straightforward but time and resource intensive process, taking from two and one-half to three years.

We use markers from our established and validated database of SNP markers (Figure 2) to select mice carrying the gene of interest and the highest percentage of host DNA markers for each backcross mating. This approach significantly decreases the number of generations needed and creates a 99.9% congenic strain in only 15-18 months.

### Pricing for Speed Congenic Development

- \$30,200\* includes importation, rederivation, assay transfer fee, genotyping, and breeding
- \$27,000 for mice already in a Breeding Services colony or an existing JAX® Mice strain

\* Pricing for standard speed congenic projects. Please inquire to receive pricing for customized projects. Standard speed congenic projects involve a single genetic modification with typical Mendelian inheritance. Strains with low fertility or low viability are not considered for standard projects. The following recipient backgrounds are available for standard projects: A/J, BALB/cByJ, BALB/cJ, C3H/HeJ, C57BL/6J, C57BL/10J, DBA/1J, DBA/2J, FVB/NJ, NOD/ShiLtJ, 129X1/SvJ, and 129S1/SvImJ.

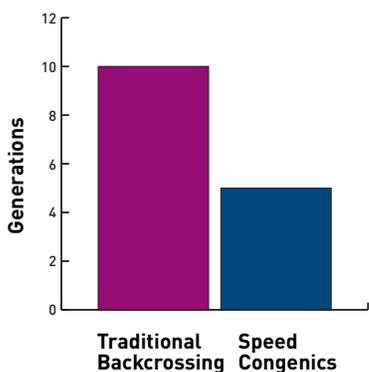


Figure 1 Speed congenics takes half the number of generations (about five) to achieve 99% congenicity, compared to 10 generations with a traditional breeding approach.

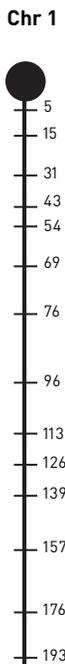


Figure 2 SNP-marker locations on *Mus musculus* Chromosome 1 for strains 129S1/SvImJ (002448) and C57BL/6J (000664). A typical congenic strain development marker panel will scan all 19 autosomes of the mouse genome at a similar density of approximately 15 megabase (Mb) intervals. This is equivalent to a genome-wide scan density of one marker every 7.5 cM.

## Rederivation

If your mouse colonies acquire an opportunistic organism or become infected with an undesired pathogen or parasite, the presence of such organisms can change the phenotype of your mice, alter breeding efficiencies, and compromise their health impacting your research program. We can rederive your strains and provide you with Specified and Opportunistic Pathogen Free (SOPF) mice, ensuring the highest health standards of your research colonies as you proceed.

Our innovative **Speed Rederivation** service uses *in vitro* fertilization (IVF) and embryo transfer to rederive strains on common genetic backgrounds within 12-15 weeks from receipt of your mice. Benefits of this service include:

- Fast turnaround time.
  - Minimum of eight pups<sup>1</sup> (typically 12 or more).
  - Includes sperm cryopreservation of your strain plus two years<sup>2</sup> of liquid nitrogen storage.
- <sup>1</sup> Donor males must be between 10-16 weeks of age.  
<sup>2</sup> First year of storage ends on December 31 of the year that the cryopreservation is complete.

Our **Custom Rederivation** service maintains the inbred or homozygous state of the colony by using both females and males from your colony. This service also uses *in vitro* fertilization (IVF) and embryo transfer to rederive strains within 12-15 weeks from the receipt of your mice.



# Breeding & Rederivation Services

## Pricing for Rederivation

Description	Standard	Preferred (with breeding project)
Speed Rederivation via IVF with Sperm Cryopreservation <sup>1</sup>	\$3,850*	\$3,200
Custom Rederivation	\$5,495	\$4,250

<sup>1</sup> For the following strain backgrounds: BALB/cByJ, BALB/cJ, C3H/HeJ, C57BL/6J, DBA/1J, DBA/2J, FVB/NJ, NOD/ShiLtJ, B6C3F1/J and B6129SF1/J

\* International orders at a 30% upcharge

## Strain Rescue

If your mouse colonies have ceased reproducing due to aging or are threatened by health or other issues, we may be able to help. Our staff can employ a variety of advanced reproductive technologies for rescuing mouse strains. While we cannot guarantee success (our success rate is above 80%), the sooner you address this issue the greater the likelihood of a successful outcome.

The techniques we can use include the following:

- *In vitro* fertilization (IVF).
- Sperm collection and freezing.
- Superovulation of females and oocyte collection.
- Ovary transplant.
- Embryo culture, freezing, and transfer in SOPF facility.

### Pricing for Strain Rescue

\$5,575/strain/attempt

## Genotyping

### Pricing for Genotyping

Genotyping is performed in conjunction with our breeding and reproductive sciences services.

#### Standard PCR, melt-curve and pyrosequencing

One Gene	Two Genes	Three Genes
\$16.50	\$19.00	\$20.00

#### Quantitative PCR (qPCR)

One Allele	Two Alleles	Three Alleles
\$17.35	\$22.05	\$27.30

Genotype Assay Transfer/ Development Fee (PCR or qPCR)	\$595.00/ assay *
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\* No charge for Breeding Services projects lasting 12 months or longer or in conjunction with *In Vivo* efficacy testing projects.

### Other Procedures

Description	Isolator	Barrier
Weighing (per instance per animal)	\$1.60	\$1.50
Animal ID (ear tag or notch) with tissue sample collection (per animal)	\$2.75	\$2.75
Microchipping (implantation plus cost of chip)	\$18.50	\$18.50
Tattoo Identification (per animal)	N/A	\$6.50



# Cryopreservation & Recovery Services

The Jackson Laboratory has pioneered the development and utilization of cryopreservation as a cost-effective method for protecting valuable strains, managing colonies, and ensuring animals of the highest health status.

## Our unrivaled experience includes:

- Over 22,000 unique strains cryopreserved to date:
  - o More than 15,000 strains using our sperm cryo method.
  - o More than 4 million embryos cryopreserved to date.
- More than 2,500 cryorecoveries performed annually.
- More than 12,000 embryo transfers performed annually.

All of our cryopreservation processes are rigorously monitored and adhere to the highest quality control standards. Embryos generated validate the media and environmental conditions used in IVF procedures. Samples are safely and securely cryo stored in three tanks in two separate locations.

## Sperm Cryopreservation

Our Reproductive Sciences group developed a highly efficient, reliable, and patented method to cryopreserve mouse sperm (Ostermeier et al. 2008 *PLoS ONE*). To date, we have successfully cryopreserved and recovered over 15,000 strains using this technology.

Strains cryopreserved as sperm using our service can be quickly and economically recovered and directly expanded from the cryopreserved sperm, providing scalable quantities of Specified and Opportunistic Pathogen Free (SOPF) mice. Our exclusive Sperm Cryo Service enables mouse colonies to be managed more efficiently: those strains not under active study can be removed from the shelf, yet quickly and economically recovered if needed for further studies. Sperm cryopreservation should be utilized as a central component of disaster preparedness and recovery planning, as well as for programs designed to reduce operating costs, relieving investigators and core facilities of the burden of maintaining live strains.

The service requires only two males from your colony and includes an IVF test to determine the fertilization capacity of the cryopreserved sperm and two years of storage.

## Sperm Cryorecovery

Strains cryopreserved by The Jackson Laboratory through our Sperm Cryo service or using our JAX® Sperm Cryo Kit can be quickly, reliably, and cost-effectively recovered. A standard recovery typically yields 10 or more pups, though no quantity is guaranteed. Recoveries can be scaled to produce large quantities of age-matched mice and at a SOPF health status.

Strains cryopreserved as sperm by other organizations that did not use the JAX® Sperm Cryo Kit will be evaluated for feasibility and price.

## Pricing for Sperm Cryopreservation and Recovery

Oocyte Donor (Stock Number)	Sperm Cryo Price	QC to Live-Born	Mice Standard Recovery
C57BL/6J (000664)			
C57BL/6NJ (005304)			
DBA/2J (000671)			
C3H/HeJ (000659)			
FVB/NJ (001800)			
B6C3F1/J (100010)	\$1,650*	\$1,025*	\$1,900*
B6129SF1/J (101043)			
DBA/1J (000670)			
NOD/ShiLtJ (001976)			
BALB/cByJ (001026)			
BALB/cJ (000651)			

Other strain backgrounds – Inquire for pricing and feasibility. \*International orders at a 30% upcharge

- A minimum of 19 straws of sperm are inventoried for each strain.
- A quality control check (IVF rate for the frozen sperm) is included after QC.
- Two years of liquid nitrogen storage (in three separate tanks in two locations) are included, see Statement of Work for details.
- Inquire for pricing and feasibility for other strain backgrounds.
- Recovery to live-born is available as an additional quality control step.
- A “Standard Recovery” attempt for live-born typically yields 10 or more mice (no quantity is guaranteed).
- Weaned SOPF animals are normally available within 9 to 12 weeks from recovery request.



Learn more [jaxservices.jax.org/cryopreservation](https://jaxservices.jax.org/cryopreservation)

# Cryopreservation & Recovery Services

## Embryo Cryopreservation

### Custom Cryopreservation

This service can cryopreserve both homozygous and hemizygous/heterozygous inbred, mutant, and genetically modified lines of mice. Service requires male and female mice from your colony. Cost varies depending on strain background, fertility, the number of mice provided, and number of embryos needed.

### Pricing for Custom Cryopreservation

Inquire for pricing and feasibility at [jaxservices@jax.org](mailto:jaxservices@jax.org).

Strain (Stock Number)	Price*	QC to Live-Born Required?	Total Price for Service
C57BL/6J (000664)	\$3,000	No	\$3,000
FVB/NJ (001800) NOD/ShiLtJ (001976) DBA/2J (000671)	\$3,500	Yes, \$775	\$4,275
BALB/cByJ (001026)	\$3,700	Yes, \$775	\$4,475

### Speed Embryo Cryopreservation

Using IVF, superovulation, and other innovations, this service quickly, cost-effectively, and reliably cryotwo-cell embryos from strains with C57BL/6J, FVB/NJ, DBA/2J, BALB/cByJ or NOD/ShiLtJ inbred backgrounds. The service requires only three males from your colony. Target number of embryos to be cryopreserved is 250-300 embryos. Service includes two years of liquid nitrogen storage in three tanks in two locations.

### Pricing for Speed Embryo Cryopreservation

\* Includes 2 years of storage; see Statement of Work for details.

## Embryo Cryo Recovery

Up to 30 viable embryos will be thawed and transferred into two recipient females to produce live offspring. All mice recovered will be at a single week of age and at an SOPF health status. Recovery of larger quantities of embryos can be performed upon request to increase the number of live animals produced.



### Pricing for Cryorecovery Related Services

Description	Price
Shipment of straws ( <i>first strain</i> )	\$295
Shipment of straws ( <i>each subsequent straw in the same shipment</i> )	\$40/strain
Embryo Recovery	\$1,550*
Extra year of cryo storage ( <i>per strain</i> )	\$190/year

\* Price for strains cryopreserved by JAX. All others, please inquire.

## Cryo Storage

The Jackson Laboratory provides safe, secure liquid nitrogen storage of cryopreserved mouse sperm and embryos generated using our services and the JAX® Sperm Cryo Kit. Samples are stored in three tanks in two locations that are auto-filled, auto-alarmed, and constantly monitored in a secure building. The Jackson Laboratory can quickly and cost-effectively attempt recovery of your cryopreserved germplasm. All recovered mice are SOPF.

### Pricing for Cryo Storage

Price is \$190/yr/strain for strains cryopreserved by JAX. For storage of strains cryopreserved elsewhere, please inquire at [jaxservices@jax.org](mailto:jaxservices@jax.org).

## Bulk Cryo Storage

JAX offers bulk cryo storage for samples cryopreserved by transgenic core facilities, institutions, and investigators. Off-site storage at a secondary facility that has the experience and skill to recover your samples is a key component of a robust disaster recovery.

### Details

- Storage packages start at three years.
- Available for mouse germplasm (sperm, embryos or mES cells).
- Choose to backup your own storage (place your samples in a single tank at JAX) or have JAX become your primary storage site for your samples (duplicate samples in two tanks).

### Requirements

- Samples should be in clearly labeled vials or straws within cryo boxes, canes, or cassettes.
- An electronic inventory of samples referenced by storage unit (cryo box or cassette) should be provided.

### Pricing

Please inquire at [jaxservices@jax.org](mailto:jaxservices@jax.org).

# Cryopreservation & Recovery Services

## Sponsored Strain Distribution

Save time, cost, and vivarium space by having JAX maintain and distribute your unique mouse strains to fellow researchers. We import, cryopreserve, recover, curate, and distribute your strain. A detailed data sheet is created in the JAX® Mice Database ([jaxmice.jax.org/query](http://jaxmice.jax.org/query)), strain information is submitted to the Mouse Genome Informatics database (MGI, [informatics.jax.org](http://informatics.jax.org)) and the availability and application of your strain is announced to the biomedical research community. If you donate your unique strain to JAX, this will fulfill your obligation to the National Institute of Health requiring sharing of novel organisms.

### Pricing for Sponsored Strain Distribution

\$2,950/strain (for single gene mutations with allele specific assays that can be cryopreserved as sperm)

## JAX® Sperm Cryo Kit

The JAX® Sperm Cryo Kit enables researchers to cryopreserve mice strains in their own laboratories, while still enjoying the peace of mind provided by quality control (QC) testing and safe, long-term storage at The Jackson Laboratory. We have successfully cryopreserved and recovered over 13,000 genetically modified strains of mice using our sperm cryopreservation method.

The Jackson Laboratory's sperm cryopreservation method and Sperm Cryo Kit have been awarded the following patents:

Serial #	File Date	Status	Country	Patent #
13/723,721	12/21/2012	Issued	United States	8,685,637
13/165,265	06/21/2011	Issued	United States	8,420,307
2007258289	12/12/2008	Issued	Australia	2007258289
573760	12/12/2008	Issued	New Zealand	573760
200809152-2	12/11/2008	Issued	Singapore	148536
11/811968	06/12/2007	Issued	United States	8,435,729

### Kit details

Suitable for strains that can be recovered on the following inbred and hybrid genetic backgrounds: C57BL/6J, DBA/2J, C3H/HeJ, FVB/NJ, B6C3F1/J, B6129SF1/J.

Contains the following items:

- Freezing apparatus.
- Lot-tested cryoprotective media.
- Sperm collection dishes.
- Storage straws and cassettes.
- Extra reagents and plasticware to perform one practice run.
- Detailed instruction manual.
- Use of a dry shipper for shipping samples to The Jackson Laboratory.
- Quality control testing of one sperm sample from each strain to assess fertilization capacity.
- Three years of liquid nitrogen storage, in three tanks, in two locations, for each strain (see Statement of Work for details).

### Pricing for JAX® Sperm Cryo Kit

Number of Strains	Price*
3 strains	\$3,750
6 strains	\$7,025
9 strains	\$10,150

\* Prices are for U.S.A., Canada and Mexico customers. International customers please see our website at [jaxservices.jax.org/spermcryokit/international](http://jaxservices.jax.org/spermcryokit/international)

### European Customers

JANVIER Products and Services (JPS) is The Jackson Laboratory's distributor of the JAX® Sperm Cryo Kit in Austria, Belgium, the Czech Republic, France, Germany, Hungary, Italy, Netherlands, Poland, Slovakia, Spain, Switzerland, Denmark, Finland, Norway, Sweden.

### Contact Information for JANVIER Products and Services

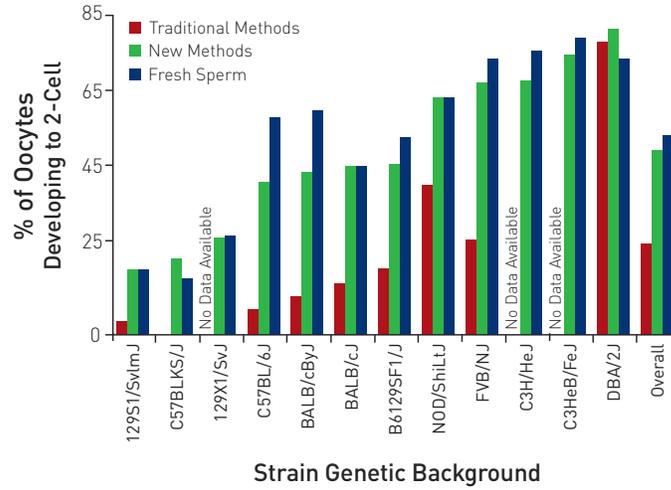
[infoservices@janvier-labs.com](mailto:infoservices@janvier-labs.com)  
Telephone: 0033 2 43 02 11 91



Learn more [jaxservices.jax.org/spermcryokit](http://jaxservices.jax.org/spermcryokit)

# Cryopreservation & Recovery Services

JAX® Sperm Cryopreservation Methods  
 Mouse Sperm Viability Across Inbred Mouse Strains



## On-Site Sperm Cryopreservation

Our reproductive specialists can travel to your facility to quickly and cost-effectively cryopreserve large numbers of strains on-site. This service is ideal for institutions or investigators with large rederivation projects or a substantial number of strains that need to be cryopreserved. The JAX team will collaborate with your internal comparative medicine and transgenic core services providers to offer a high-throughput solution to a backlog of strains needing to be cryopreserved or to facilitate the improvement of the health status by rederiving strains. We can cryopreserve up to 200 strains in a single week. Once your strains are cryopreserved, all the samples are shipped back to our Bar Harbor facility for quality control testing, recovery (if it is a rederivation) and safe, long-term storage (in three tanks in two locations).

### Pricing

Please inquire for pricing and feasibility of your project at [jaxservices@jax.org](mailto:jaxservices@jax.org).

## JAX® EZ Freeze

The Jackson Laboratory schedules regional cryopreservation events that include special pricing on our JAX® Sperm Cryo or Rederivation Services. For these special events, JAX will transport your strains from your institution to ours at no cost to you!

Check our website ([jaxservices.jax.org/cryopreservation](http://jaxservices.jax.org/cryopreservation)) to see where and when we are offering these specials, or speak to your JAX Regional Opportunity Development Manager ([jaxmice.jax.org/support/regionalcontacts](http://jaxmice.jax.org/support/regionalcontacts)).



Our Genome Science Services are founded on our validated panel of over 2,300 single nucleotide polymorphism (SNP) markers. These markers are spaced approximately 1.5 Mb or 0.75 cM apart, and are informative and easily assayed in 103 mouse strains, including virtually all of the most commonly used JAX® Mice inbred and wild-derived inbred strains. This advanced panel has several key advantages over traditional simple sequence length polymorphism (SSLP) marker analysis, including higher resolution and greater inbred panel selection. Detailed reports are included in for all of these services and investigators have direct access to and support from our experienced technical information scientists and genetic research services staff.

## Genome Scanning

One-time scans can be used to characterize certain strain mixtures, to map new mutations, or to detect/measure recent strain contamination. For investigators who wish to perform multiple backcrosses involved in construction congenics or consomic but wish to take advantage of our SNP marker panel to type and select the offspring for each backcross.

Investigators send us tail samples from the offspring (minimum of 10 recommended per generation), we type the tails and select the mice to be used for the next backcross, thereby cutting in half the time typically needed to construct a congenic strain.

Unlike microarrays or generic marker panels, we use customized SNP marker sets that are fully informative and evenly distributed throughout the genome (or genomic region of choice) to optimize coverage without gaps. No non-diagnostic SNPs are included and there are no blind spots in the genome coverage. In multigenerational scans, we can direct the marker selection to cover only the regions still segregating, saving time and money.

### SNP scanning applications for our panels

- Developing congenic mouse lines
- Confirming strain backgrounds
- Revealing strain background contamination
- Confirming B6 substrain background

### C57BL/6 Substrain Characterization Panel

C57BL/6J is the progenitor strain from which all other B6 substrains have originated. Our panel can prevent costly misinterpretation of research results that arise from genotypic and phenotypic B6 substrain differences.

- Cost-effective and rapid.
- Distinguishes between C57BL/6J (B6J) and C57BL/6N (B6N) genetic backgrounds.
- Uses 150 validated SNP markers spaced evenly throughout the genome, covering all autosomes and the X chromosome.

### Custom SNP Panel

Fully customizable, our panel of 150-200 informative polymorphic SNPs are perfectly designed to meet your needs.

- Ultimate flexibility. Only use SNPs that optimally support your project.
- SNP density of 15-20MB evenly spaced throughout the genome.
- Customized marker density of a specific genomic region.

### Pricing for Genome Scanning

C57BL/6 Substrain Characterization Panel	\$159 / <i>sample</i>
Custom SNP Panel	\$159 / <i>sample</i>



## In Vivo Pharmacology Services

### Compound Dosing

- IP, IV, SC, PO, ID.
- High pressure tail vein injections.
- In the food or water.
- Oral gavage.
- IV catheters.
- Osmotic minipumps (SC or IP).
- SC drug pellets.

### Experimental Methods

- Biospecimen collection.
- Digital caliper measurements.
- *In vitro* cell preparation: cell isolation, culture, characterization.
- Mouse model induction.
- Necropsies, tissue harvests.
- Surgical techniques.
- SC xenograft and limited orthotopic transplantation.

### Supporting Services

- Blood and urine glucose.
- Blood lipid.
- Biophotonic imaging.
- Clinical chemistry.
- Gene expression profiling.
- Histopathology.
- X-ray irradiator.

The Jackson Laboratory provides preclinical efficacy testing services for a broad spectrum of therapeutic areas such as oncology, autoimmune and inflammatory diseases, and neuromuscular/neurodegenerative disorders. For a complete list of disease models available, please visit [jaxservices.jax.org/invivo](http://jaxservices.jax.org/invivo).

In addition to providing reproducibility, efficient timelines, and quality reporting, our preclinical services are characterized by:

- Executing standard or custom-designed protocols.
- Inducing disease by chemical, surgical, diet or genetic techniques.
- Dosing by all commonly used routes.
- Testing numerous medicinal entities, including small molecules, antibodies, siRNAs and ES cell derived therapies.
- Study execution and data interpretation by highly experienced Ph.D.-level study directors.

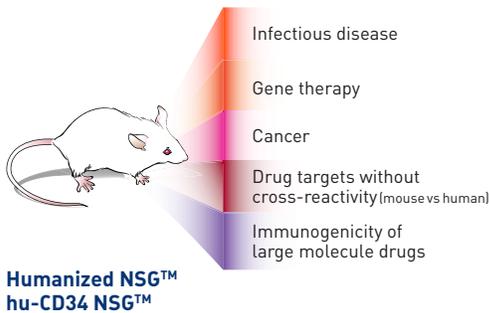
# In Vivo Pharmacology Services

## Humanized CD34<sup>+</sup> Mice (hu-CD34<sup>+</sup>)

NSG<sup>TM</sup> mice engrafted with human hematopoietic stem cells enriched by selection for the CD34 cell surface marker. Mice contain ≥ 25% human CD45<sup>+</sup> cells in the peripheral blood 12 weeks post engraftment. Delayed type hypersensitivity and LPS challenge assays suggest the presence of a functional human immune system in these animals. These mice can be used to support research on hematopoiesis, inflammatory disease, gene therapy, immuno-oncology and human-specific pathogens, and:

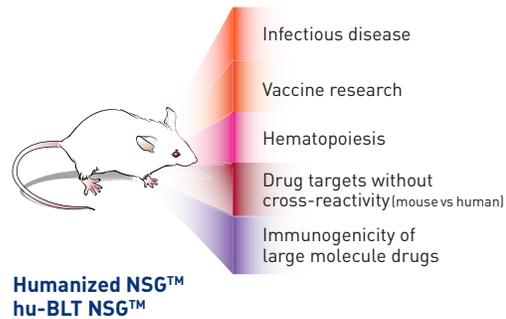
- Possess a reconstituted human immune system with differentiation of all major lineages of human hematopoietic cells (Shultz et al, 2005, *J Immunol* 174:6477-6489).
- Show delayed type hypersensitivity (DTH) response, suggesting the presence of a functional human immune system (Unsinger et al, 2009, *J Leukoc Biol* 86:219-227).
- Serve as a platform to support human-specific *in vivo* pharmacology studies (no cross-reactivity of molecules and/or pathways between mice and humans).

Readily available for shipment to your institution. Researchers may also sponsor drug efficacy studies that will be executed by the *In Vivo* Pharmacology Services group.



## Humanized BLT Mice (hu-BLT)

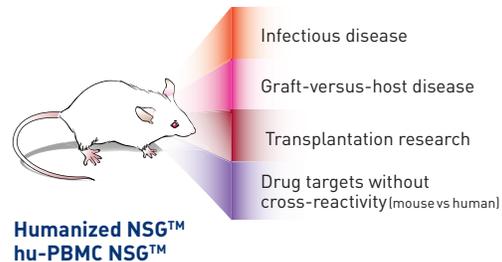
The hu-NSG<sup>TM</sup> mouse with the most advanced immune function reported to date. Human thymus and liver tissue are engrafted under the kidney capsule followed by transplantation of donor-matched CD34<sup>+</sup> enriched hematopoietic stem cells. Mice contain ≥ 25% human CD45<sup>+</sup> cells in the peripheral blood 12 weeks post engraftment. Developing human T cells are educated in the context of human leukocyte antigen (HLA), enabling human antigen specific immune responses. BLT engrafted hu-NSG<sup>TM</sup> mice develop enhanced antibody production and mucosal immunity not observed in other hu-NSG<sup>TM</sup> models, allowing study of disease transmission and prophylaxis through mucosal routes of infection.



## Humanized PBMC Mice (hu-PBMC)

NSG<sup>TM</sup> mice engrafted with mature human peripheral blood mononuclear cells (PBMC). This platform enables rapid, but short-term, establishment of functional human immune cells in the circulation of a mouse. Engrafted mice enable human specific infectious disease research. They also develop a robust xenogeneic graft versus host disease (GvHD), allowing study of the immunobiology of this reaction and development of therapeutic intervention strategies.

For more information, please visit our website at [jaxservices.jax.org/invivo/humanized-nsg](http://jaxservices.jax.org/invivo/humanized-nsg).



Learn more [jaxservices.jax.org/invivo/humanized-mice](http://jaxservices.jax.org/invivo/humanized-mice)

## Patient-Derived Xenograft (PDX) Resource

Our patient-derived xenograft resource represents a significant improvement over existing cancer models. Patient tumors engrafted into the NSG™ mice closely match the original tumors in histology, gene expression, response to standard of care and genetic markers. The PDX models (which include tumor gene expression and copy number variation data), developed in collaboration with renowned medical centers throughout the United States, support preclinical efficacy studies and early discovery research.

For an up-to-date list of established PDX models and to search for specific models and access data, visit the Mouse Tumor Biology Database at [tumor.informatics.jax.org/mtbwi/pdxSearch.do](http://tumor.informatics.jax.org/mtbwi/pdxSearch.do).

### Advantages

- Gene expression and copy number variation data available.
- Clinical information available.
- Low passage number models.
- Tumor bearing mice available for delivery.
- Amenable to high throughput efficacy studies.

### Established PDX Models

- Breast.
- Lung.
- Bladder.
- Pancreas.
- Acute myeloid leukemia (AML).
- Ovarian.
- Many others.

## PDX Live™ Tumor Models

Execution of patient-derived xenograft studies is time-consuming, with pre-study engraftment and growth of tumors representing a significant time investment. To streamline PDX study execution, we are offering a collection of PDX Live™ tumor engrafted NSG™ mice.

Our collection of readily available, off-the-shelf, tumor engrafted cohorts is developed and maintained by our experienced scientific staff, and tumor-bearing mice are ready to quickly enroll on study.

View the current listing of PDX Live™ tumor models available or learn more by visiting [jaxservices.jax.org/invivo/pdx-live](http://jaxservices.jax.org/invivo/pdx-live).

### Get Your Data Up To 80% Faster

Bringing tumors out of the freezer or passaging tumors between donor and on-study mice can delay studies 6-12 weeks or more. Our inventoried PDX Live™ tumors significantly shorten this time period by having tumor-engrafted live mice on the shelf and ready to enroll on study as soon as you are ready.

### Make Decisions Earlier

JAX tumor-bearing PDX mice are available at lower passages than any other patient-derived xenograft model provider. Tumors preserve the heterogeneity of the original human cancers and the closest possible response of primary human tumors, allowing you to determine with greatest accuracy the potential clinical efficacy of novel therapeutics.

- Complete the form to tell us which tumors we should engraft next. ([jaxservices.jax.org/invivo/pdx-live-tumors](http://jaxservices.jax.org/invivo/pdx-live-tumors))

## Mouse Embryonic Stem Cells

Suitable for drug efficacy evaluation, regenerative medicine studies and gene targeting, JAX® mES cells are isolated from the inner cell mass of embryonic day 3.5 blastocysts. They are pluripotent, non-transformed cells with the ability to generate germline founders when injected into host blastocysts, making them ideal for novel strain creation.

### Available JAX® mES cells

Item number	Product name	Passage number	Price per vial
000058C02 <sup>b</sup>	B6(Cg)- <i>Tyr<sup>c-2J</sup></i> /J-PRX-B6-albino #1 mES cells	10	\$1,095
000486C01 <sup>a</sup>	MRL/MpJ-PB61.11 mES cells	9	\$695
000651C01 <sup>c</sup>	BALB/cJ-line I mES cells <sup>1</sup>	9	\$695
000651C02 <sup>b</sup>	BALB/cJ-PRX-BALB/cJ #9 mES cells	10	\$995
000659C01 <sup>a</sup>	C3H/HeJ-PB151.24 mES cells	10	\$695
000659C02 <sup>b</sup>	C3H/HeJ-PRX-C3H #2 mES cells	10	\$995
000659C03	C3H/HeJ AC386/GrsrJ mES cells	11	\$995
000671C01	DBA/2J AC203/GrsrJ mES cells	12	\$995
000671C02	DBA/2J AC173/GrsrJ mES cells	11	\$995
000691C02 <sup>b</sup>	129X1/SvJ-PRX-129X1 #1 mES cells	10	\$995
001026C01 <sup>a</sup>	BALB/cByJ-PB150.18 mES cells	8	\$695
001026C02 <sup>a</sup>	BALB/cByJ AC383/GrsrJ mES cells	10	\$995
001058C01 <sup>a</sup>	NZW/LacJ-PB35.17 mES cells	9	\$695
001428C01 <sup>b</sup>	C3Fe.SWV- <i>Mbp<sup>shi</sup></i> /J WT PRX-#1 mES cells	10	\$1,200
001428C02 <sup>b</sup>	C3Fe.SWV- <i>Mbp<sup>shi</sup></i> /J Het PRX-#16 mES cells	10	\$1,200
001428C03 <sup>b</sup>	C3Fe.SWV- <i>Mbp<sup>shi</sup></i> /J Hom PRX-#1003 mES cells	10	\$1,200
001800C01 <sup>a</sup>	FVB/NJ-PB84.3 mES cells	10	\$695
002282C01 <sup>a</sup>	BTBR <i>T<sup>+</sup> Itpr3<sup>fl</sup></i> /J-PB60.6 mES cells	9	\$695
004304C01	NOD.CBALs- <i>Tyr<sup>r</sup></i> JAG020 mES cells	8	\$1,095
004660C01	PWD/PhJ AC401/GrsrJ mES cells	7	\$695
012448C01 <sup>b</sup>	C57BL/6N-PRX-B6N #1 mES cells	8	\$1,095
012448C02 <sup>b</sup>	C57BL/6N-PRX-B6N #1 mES cells	10	\$2,995
017529C01	91-1 (Hsa21) mES cells	27	\$495
004379C01	C57BL/6J-Chr 1 <sup>A/J</sup> /NaJ I11/GrsrJ mES cells	8	\$695
004380C01	C57BL/6J-Chr 2 <sup>A/J</sup> /NaJ I21/GrsrJ mES cells	7	\$695
004381C01	C57BL/6J-Chr 3 <sup>A/J</sup> /NaJ I27/GrsrJ mES cells	8	\$695
004384C01	C57BL/6J-Chr 6 <sup>A/J</sup> /NaJ I78/GrsrJ mES cells	6	\$695
004387C01	C57BL/6J-Chr 9 <sup>A/J</sup> /NaJ AC429/GrsrJ mES cells	6	\$695
004388C01	C57BL/6J-Chr 10 <sup>A/J</sup> /NaJ AC446/GrsrJ mES cells	6	\$695
004389C01	C57BL/6J-Chr 11A/J/NaJ AC453/GrsrJ mES cells	6	\$695

<sup>a</sup> Produced by Predictive Biology (predictivebio.com). Testing for germ line competency is not complete for these mES cells.

<sup>b</sup> Produced by Primogenix (primogenix.com). Testing for germ line competency, where completed, is documented on the spec sheet for these mES cells.

<sup>a,b</sup> JAX makes no guarantee that this cell line can be used to generate targeted clones or, if targeted clones are created, that they will be germ line competent.

<sup>c</sup> Provided by Jacob Hanna, M.D., Ph.D. of the Whitehead Institute for Biomedical Research, Cambridge, MA. The Jackson Laboratory has not conducted germline transmission testing with these cells. Note that commercial entities must obtain a use license.

#### Reference

Schuster-Gossler K, et al. 2001. Use of coisogenic host blastocysts for efficient establishment of germline chimeras with C57BL/6J ES cell lines. *Biotechniques* 31:1022-1023, 1026.

Learn more [jaxmice.jax.org/cells](http://jaxmice.jax.org/cells)

# Cells, Tissues & Products

## Cryopreserved Mouse Embryos

Select JAX® Mice strains are readily available as cryopreserved embryos for efficient importation into your facility. Each shipment contains enough embryos to recover a minimum of two pairs of mice. A detailed recovery protocol is provided to help you ensure a successful cryo recovery. We can also provide embryos from other JAX® Mice upon request. Please inquire for feasibility and pricing at [jaxservices@jax.org](mailto:jaxservices@jax.org).

## JAX® Morula Stage Embryos

C57BL/6J (000664) and B6-albino (000058) embryos cryopreserved at the morula stage of development can be ready to inject with ES cells after overnight culture. For additional details, [jaxmice.jax.org/cells/morula](http://jaxmice.jax.org/cells/morula).

## Tissues & Biospecimens

More than fifty cell, tissue, and fluid types are available from any JAX® Mice strain. Samples are collected and prepared by highly skilled surgeons using aseptic techniques and are available freshly harvested, frozen, flash frozen (with liquid nitrogen), or fixed as needed. View available Tissues and Biospecimens and pricing information at [jaxmice.jax.org/tissues](http://jaxmice.jax.org/tissues).

## JAX® Sperm Cryo Kit

The JAX® Sperm Cryo Kit enables researchers to cryopreserve mouse strains in their own laboratories, while still enjoying the peace of mind provided by quality control testing and safe, long-term storage at The Jackson Laboratory. We have successfully cryopreserved and recovered over 13,000 genetically modified strains of mice using our sperm cryopreservation method. You can obtain comparable results in your own lab with this exclusive Kit.

For full details on our Sperm Cryo Kit, see page 79.

## JAX® Mice Shipping Containers

Our patented, recyclable shipping containers are specifically designed for laboratory mice and are ideal for transporting them within your facility. These containers are designed to minimize shipping stress and prevent exposure to infectious agents. With their greater depth compared to other containers, they also ensure safety and ease-of-handling, particularly when dealing with “jumpy” mouse strains. JAX® Mice Shipping Containers are reusable and recyclable.

### Specifications

- User-friendly lid with security seal.
- Superior airflow through openings on two sides and top.
- Sonic-welded filter.
- Divider insert converts container to either one or two compartments.
- Clear lid windows for easy inspection during transit.
- All plastic construction; no staples or wires.
- Ideal size for packing and unpacking mice within a hood.
- Meets International Air Transport Association (IATA) specifications.
- Autoclavable, Reusable and Recyclable.

### Dimensions

- Outside: 17.9” long x 11.4” wide x 7.5” high
- Inside Floor Space: 14.6” long x 8” wide
- Nested (6 containers with lids):  
17.9” long x 11.4” wide x 22” high

For pricing, recycling information, container specifications, and other details, [jaxmice.jax.org/cells/container](http://jaxmice.jax.org/cells/container).



# Animal Health & Genetic Quality

## Animal Health

The Jackson Laboratory upholds the highest standards of animal care, treatment, and quality for all JAX® Mice strains. Since 1967, we have been fully and continuously accredited by the Association for Assessment and Accreditation of Laboratory Animal Care (AAALAC) International. The goals of our Animal Health Program are:

- Assure the health and well-being of mouse colonies through routine and extensive monitoring for infectious agents (see below).
- Prevent the entry of infectious agents by rederiving and strictly monitoring the health of all incoming mice.
- Minimize the transmission of infectious agents by using protective individually ventilated caging or microisolator caging, and adhering to rigorous animal husbandry processes and practices.

### List of Agents Monitored

The same agents listed below are monitored in our Production, Repository, Breeding Services and *In Vivo* Pharmacology Services barriers and isolators. Exclusion policies and policies related to shipping and customer notifications differ depending on the facility and barrier level. Detailed information on communication and shipping policies are outlined in detail at [jaxmice.jax.org/health/agents\\_list](http://jaxmice.jax.org/health/agents_list).

### Mouse pathogens

#### Viruses

Ectromelia virus (agent causing mouse pox)  
GDVII (Theiler's mouse encephalomyelitis) virus  
Hantaan virus (Hantavirus)\* †  
K virus  
Lactic dehydrogenase elevating virus  
Lymphocytic choriomeningitis (LCMV) †  
Mouse adenovirus (MAV)  
Mouse cytomegalovirus (MCMV)  
Mouse hepatitis virus (MHV)  
Mouse minute virus (MMV) (formerly MVM)  
Murine norovirus (MNV)  
Mouse parvovirus (MPV)  
Mouse thymic virus (MTV)  
Pneumonia virus of mice (PVM)  
Polyoma virus  
Reovirus 3 (REO 3)  
Rotavirus (Epizootic diarrhea of infant mice [EDIM])  
Sendai virus

### Bacteria, mycoplasma & fungi

*Bordetella bronchiseptica*  
CAR bacillus  
*Citrobacter rodentium* (*Citrobacter freundii* 4280)  
*Clostridium piliforme*  
*Corynebacterium bovis*  
*Corynebacterium kutscheri*  
*Helicobacter* spp.  
*Mycoplasma pulmonis*  
*Pasteurella pneumotropica*  
*Salmonella* spp.  
*Streptobacillus moniliformis*

### Parasites

*Encephalitozoon cuniculi*  
Fleas  
Fur mites, lice  
Follicle mites  
Pinworms  
Opportunistic protozoa (e.g., *Giardia*, *Spiroplasma*)  
Roundworms and other helminths  
Tapeworms

### Other organisms monitored

*Klebsiella pneumoniae*  
*Klebsiella* spp. other than *K. pneumoniae*  
Nonpathogenic protozoa (e.g., trichomonads)  
*Pneumocystis murina*\*\*  
*Proteus mirabilis*  
*Pseudomonas* spp.  
*Staphylococcus aureus*  
*Streptococcus* spp.

\* Although neither wild nor laboratory mice of the genus *Mus* are natural hosts for hanta viruses, these agents have a zoonotic potential. Therefore, as a precautionary measure, we monitor all JAX® Mice for their presence.

\*\* *Pneumocystis murina* are monitored only in severely immunodeficient mice and only if they are housed in the room.

† Zoonotic agents

# Animal Health & Genetic Quality

## Genetic Quality

As the repository and distributor for over 8,000 JAX® Mice strains, we are committed to ensuring the highest standards of genetic stability and quality assurance. We ensure this quality through the following programs:

### Genetic Stability Program

Ensure your data are reproducible and stand the test of time by using the most genetically stable mouse models available. Our patented Genetic Stability Program (GSP) (US patent 7,592,501 and 8,110,721) prevents cumulative genetic drift in a select group of the most commonly used research strains. This unique program uses a 25-year supply of frozen embryos to refresh foundation stocks (FS) every 5 generations so the mice you receive today will be the same as those you and future scientists receive for decades to come. (Taft et al. 2006. *Trends Genet* 22:649-53).

We continue to expand our GSP program each year.

Look for the GSP symbol on JAX® Mice web pages or view a list of current GSP strains at [jaxmice.jax.org/genetichealth/stability](http://jaxmice.jax.org/genetichealth/stability).



Foundation stocks of several broadly used strains are refreshed with cryorecovered embryos every five generations.

“This insidious evolution of the inbred genotype is known as genetic drift. It is capable of subverting the conclusions reached about comparable research results coming from different laboratories when each uses its own subline of the same inbred strain.”

(Bailey. 1977. *Ciba Found Symp* 52:291-303)

## Genetic Quality Control Program

Our Genetic Quality Control (GQC) program is designed to detect the genetic contamination of one strain with another as a result of a breeding error. Continually improved over the past 30 years, our GQC program is founded on the following three components:

1. Highly skilled animal caretakers that receive ongoing professional training, including rigorous genetics and animal husbandry courses.
2. Rigorous colony management protocols, which include:
  - Adhering to proven mouse husbandry practices.
  - Isolating foundation, expansion, and production stocks from each other.
  - Maintaining detailed pedigrees of foundation and expansion stocks.
  - Limiting foundation and expansion stock generations to less than 10 generations from the main pedigree line.
  - Systematically refreshing production stocks with foundation stock mice.
3. Systematic screens for variant genotypes and phenotypes, including:
  - Routine genotyping of all foundation stock breeders with a unique JAX SNP marker panel (Petkov et al. 2004. *Genomics* 83:902-11) to confirm strain background and genotype all FS breeders carrying expected mutations using allele-specific assays.
  - Random selection and SNP-genotyping of mice from each strain of expansion and production stocks.
  - Use of allele-specific assays to verify mutant alleles of genetically engineered and spontaneous mutants.
  - Constant lookout for phenotype deviations by highly skilled animal care technicians—including coat color, behavior and physical abnormalities.
  - Removal of mice with deviant phenotypes and closely monitor parent strains for the recurrence of the phenotypes.
  - Collaboration with JAX scientists to determine the causes and heritability of new and possibly valuable deviant phenotypes.

Learn more [jaxmice.jax.org/genetichealth/stability](http://jaxmice.jax.org/genetichealth/stability)

## Genotyping

A panel of single nucleotide polymorphic (SNP) markers developed by our scientists is the primary molecular typing tool for verifying genetic background and monitoring genetic quality (Petkov et al. 2004. *Genomics* 83:902-11; Petkov et al. 2004. *Genome Res* 14:1806-11). The 2,000+ markers in the panel are highly informative and easily assayed in 103 mouse strains, including virtually all of the most commonly used JAX® Mice inbred and wild-derived inbred strains. A subset of merely 32 of these markers is used to verify the genetic background of all JAX® Mice strains. In special cases where the SNP panel is not sufficient, other molecular, biochemical and immunological assays may be used including hemagglutination, isozyme, hemolytic complement and major histocompatibility complex (MHC) assays. For more details on how genetic quality is monitored, visit [jaxmice.jax.org/genetichealth/GQCprogram](http://jaxmice.jax.org/genetichealth/GQCprogram).

Our high-throughput genotyping lab routinely processes thousands of samples per week. Our allele-specific genotyping methods include standard polymerase chain reaction (PCR), quantitative PCR, melt curve analysis, endpoint and pyrosequencing. We use published PCR protocols or develop our own. All genotyping protocols are available online from individual strain data sheets of the JAX® Mice Database at [jaxmice.jax.org/query](http://jaxmice.jax.org/query).

# General Terms & Conditions

## Scientific and Educational Mission

For over 80 years, The Jackson Laboratory has been the world leader of mouse-based biomedical research, providing mice, mouse-based services, and education to the research community. Over this period of time we have accumulated a wealth of information on mouse husbandry, genetics, biology and the selection and use of mice in research. We respect requests for confidentiality but also encourage and support publication of research and reserve the right to share any non-confidential information we learn as a research animal repository or as a service provider through our scientific presentations, publications, and public databases.

## JAX<sup>®</sup> Mice, Products & Services Conditions of Use

Please note: The following material was accurate when this publication went to press. Please see our website for any changes ([jaxmice.jax.org/cou](http://jaxmice.jax.org/cou)).

“MICE” means mouse strains, their progeny derived by inbreeding or crossbreeding, unmodified derivatives from mouse strains or their progeny supplied by The Jackson Laboratory (“JACKSON”). “PRODUCT(S)” means biological materials supplied by JACKSON, and their derivatives. “SERVICES” means projects conducted by JACKSON for other parties that may include but are not limited to the use of MICE or PRODUCTS. “RECIPIENT” means each recipient of MICE, PRODUCTS, or SERVICES provided by JACKSON including each institution, its employees and other researchers under its control. MICE or PRODUCTS shall not be: (i) used for any purpose other than the internal research, (ii) sold or otherwise provided to any third party for any use, or (iii) provided to any agent or other third party to provide breeding or other services. Acceptance of MICE, PRODUCTS or SERVICES from JACKSON shall be deemed as agreement by RECIPIENT to these conditions, and departure from these conditions requires JACKSON’s prior written authorization.

### No Warranty

Mice, products, and services are provided “as is”. Jackson extends no warranties of any kind, either expressed, implied or statutory, with respect to mice, products, or services, including any implied warranty of merchantability or fitness for a particular purpose, or any warranty of non-infringement of any patent, trademark, or other intellectual property rights.

### Credit for live JAX<sup>®</sup> MICE

Credit will be issued for MICE received at your facility that are dead or moribund or for those that die or become ill within three days after arrival. Credit requests must be received by email or by telephone followed by a written notification of the problem (see Customer Service contact information)—within five days after the delivery date of the order. We issue credit for MICE received in damaged containers if damage is noted on the delivery manifest.

Credit is not provided for the following circumstances:

1. Shipment of MICE 17-days-old (or younger) that arrive dead or moribund. We cannot guarantee that such young MICE will survive shipment.
2. Shipment of timed pregnant females at 1 to 10 days post-mating that are not pregnant.
3. Non-productive MICE.

**Important Note:** Credit applies only to shipments of JAX<sup>®</sup> MICE for which transportation of the MICE from The Jackson Laboratory to the customer’s specified delivery site has been arranged solely by The Jackson Laboratory.

### Credit for PRODUCTS or SERVICES

In case of dissatisfaction for a valid reason and claimed in writing by a purchaser within ninety (90) days of receipt of, PRODUCTS or SERVICES, JACKSON will, at its option, provide credit or replacement for the PRODUCT received or the SERVICES provided; JACKSON makes no other representations and this shall be the exclusive remedy of the purchaser.

# General Terms & Conditions

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## No Liability

In no event shall JACKSON, its trustees, directors, officers, employees, and affiliates be liable for any causes of action or damages, including any direct, indirect, special, or consequential damages, arising out of the provision of MICE, PRODUCTS, or SERVICES, including economic damage or injury to property and lost profits, and including any damage arising from acts or negligence on the part of JACKSON, its agents or employees. Unless prohibited by law, in purchasing or receiving MICE, PRODUCTS, or SERVICES from JACKSON, purchaser or recipient, or any party claiming by or through them, expressly releases and discharges JACKSON from all such causes of action or damages, and further agrees to defend and indemnify JACKSON from any costs or damages arising out of any third party claims.

MICE, PRODUCTS or SERVICES are to be used in a safe manner and in accordance with all applicable governmental rules and regulations.

The foregoing represents the General Terms and Conditions applicable to JACKSON's MICE, PRODUCTS or SERVICES. In addition, special terms and conditions of sale of certain MICE, PRODUCTS, or SERVICES may be set forth separately in JACKSON web pages, catalogs, price lists, contracts, and/or other documents, and these special terms and conditions shall also govern the sale of these MICE, PRODUCTS and SERVICES by JACKSON, and by its licensees and distributors.

Acceptance of delivery of MICE, PRODUCTS or SERVICES shall be deemed agreement to these terms and conditions. No purchase order or other document transmitted by purchaser or recipient that may modify the terms and conditions hereof, shall be in any way binding on JACKSON, and instead the terms and conditions set forth herein, including any special terms and conditions set forth separately, shall govern the sale of MICE, PRODUCTS or SERVICES by JACKSON.

## Policy on Licensing and Use Restriction

Committed to advancing biomedical research, The Jackson Laboratory makes every effort to distribute mouse strains and biological materials that are unencumbered by license restrictions. However, some institutions and companies have created genetically engineered strains, biological materials or have developed patented technology used in the development of mice and biological materials. The Jackson Laboratory asks users to work directly with the institutions or companies to acquire licenses if necessary. Strains that require license agreements or other use restrictions are noted in JAX® Mice strain data sheets under Terms of Use on a strain by strain and product-by-product basis.

# Knowledge to Drive Discovery

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From our complimentary webinars to our blog articles, we put scientific resources at your disposal. Discover the latest breakthrough mouse models, the newest tools and platforms for preclinical modeling, advanced techniques in genetic engineering, colony management considerations to control research costs, and much more.

## Sign up for a webinar

[jax.org/jaxmice/webinar](http://jax.org/jaxmice/webinar)

Our webinars are a quick and easy way to gain knowledge and insights from Jackson Laboratory scientists. Take advantage of the live chat and Q&A session to gain the most from these events.

## JAX Webinar™ topics include:

- Using Humanized Mice and PDX Models in Preclinical Research and Drug Efficacy Studies
- Diverse Research Applications of Immune Deficient Mice
- Humanized Mice and Resources for Infectious Disease Research
- Mouse Models of Cancer (Sporadic and Xenograft platforms)
- Mouse Colony Management, Animal Care & Handling and Reproductive Biology
- Basic and Advanced Experimental Approaches to Using Cre-Lox Technology to Model Human Diseases
- Mouse Models and Resources for Type 1 and Type 2 Diabetes and Obesity Research
- Autoimmune and Inflammatory Disease Models and Resources
- Neuroscience Mouse Models and Resources
- And many more!

## Check out our blog

[jax.org/jaxmice/events/blog](http://jax.org/jaxmice/events/blog)

MouseClique is the JAX® Mice & Services blog, providing information and ideas to make your life in the lab easier.

## Subscribe to JAX® Mice eNews

[jax.org/jaxmice/news](http://jax.org/jaxmice/news)

Be the first to hear about the latest transgenic, knockout, and other JAX® Mice strains, JAX® Services, upcoming seminars, inventory reports, courses and conferences, scientific publications, and research news. Subscribe today!

## JAX® Mice, Clinical & Research Services

The Jackson Laboratory

Bar Harbor, Maine | Farmington, Conn. | Sacramento, Calif.

[jax.org/jaxmice](http://jax.org/jaxmice)

1-800-422-6423 (US, Canada & Puerto Rico)

1-207-288-5845 (from any location)

### *Customer Service*

Online: [jax.org/jaxmice/orderquest](http://jax.org/jaxmice/orderquest)

Tel: 1-800-422-64223 or 1-207-288-5845

Fax: 1-207-288-6150

Email: [orderquest@jax.org](mailto:orderquest@jax.org)

### *Technical Support*

Online: [jax.org/jaxmice/micetech](http://jax.org/jaxmice/micetech)

Tel: 1-800-422-6423 or 1-207-288-5845

Fax: 1-207-288-6629

