



# Immunodeficient Models

THE LARGEST PORTFOLIO OF IMMUNODEFICIENT  
MOUSE AND RAT MODELS AVAILABLE TODAY

# Immunodeficient Models

Immunodeficient models have contributed to major scientific advances in immunology, transplantation, oncology, stem cell research, and infectious disease therapies. Taconic Biosciences is proud to offer a wide variety of immunodeficient mouse models that can be supplied quickly and efficiently to help propel your research forward.

You can rely on Taconic to supply models ranging from the standard outbred NCr nude model used in many xenograft studies, to the HRN™ nude which lacks liver P450 metabolism, to the super immune deficient CIEA NOG mouse® which provides an unparalleled ability to engraft human cells and tissues, thus making it an excellent choice for humanization studies.

Taconic also offers several popular models with Restricted Flora™, Excluded Flora, Opportunist Free, and Defined Flora health standard to meet your unique study needs. These models include the CIEA NOG mouse® and the C.B-17 scid.

For additional information on immunodeficient models visit [Taconic.com](http://Taconic.com)



## IMMUNODEFICIENT USES AND APPLICATIONS

### XENOGRAFTS

Immunodeficient models are capable of engrafting cells and tissues from humans and other species.

Cancer cell lines can engraft in a wide variety of immunodeficient models. Patient-derived tumor xenografts (PDX) are typically engrafted in highly immunodeficient strains such as NOD scid and NOG. Normal human tissues can also be engrafted in some models.

### ADOPTIVE TRANSFER

Transfer cells from one strain to another to study cell function and track cell movement.

Sets of models on a common background such as wild type C57BL/6NTac, B6 nude and the Rag2 knockout on the B6 background can serve as adoptive transfer partners. Cell surface markers such as CD45.1 (Ptprc) on the C57BL/6NTac background (B6.SJL model# 4007) and Rag2 (#461) can help with determination of cell origin (host or recipient).

### IMMUNE SYSTEM ENGRAFTED

Super immunodeficient strains such as the CIEA NOG mouse® and CIEA BRG mouse can be engrafted with human immune cells or tissues to reconstitute a human immune system. Mice reconstituted with a human immune system represent critical research tools for basic research into the human immune system, modeling of certain human-specific infectious diseases with an immune component, as well as efficacy testing of immunotherapy approaches and safety assessment for new therapeutics.

## TACONIC IMMUNODEFICIENT BENEFITS



### SUPERIOR HEALTH STANDARDS

Production at the Taconic Restricted Flora™, Opportunist Free™, Excluded Flora, and Defined Flora health standards permits confidence in the health status of the animals used in your studies.



### SCIENTIFIC ACCESS - CIEA NOG mouse®















Researchers receive direct access to the inventor of the CIEA NOG mouse® model for additional scientific data and know-how supporting their research.

The CIEA NOG mouse®:  
The MOST immunodeficient mouse model available today.


## TO ORDER

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## COMPARISON TABLE OF IMMUNODEFICIENT MOUSE AND RAT MODELS

MODEL NUMBER	MODEL NAME	COAT COLOR	CELL DEFICIENCIES	OTHER IMMUNODEFICIENCIES
BALBNU	BALB/c nude mouse			
B6NU	B6 nude mouse			
NCRNU	NCr nude mouse			
NMRINU	NMRI nude mouse			
NIHRNU	NIH nude rat	  		
9066*°	HRN™ nude mouse			
1147	Jh mouse			
CB17SC	C.B-17 scid mouse		 	
ICRSC	ICR scid mouse		 	
NODSC	NOD scid mouse		  Shows reduced NK function	Defective dendritic cells and macrophages and reduced complement activity.
RAG2	Rag2 (129S6) mouse		 	
461°	Rag2 (B6.SJL) mouse		 	
601	Rag2 (BALB/c) mouse		 	
RAGN12	Rag2 (C57BL/6) mouse		 	
CBSCBG	Scid-beige mouse		  	
4111	Rag2/Il2rg Double knockout mouse		  	Dysfunctional dendritic cells.
11503	CIEA BRG mouse		  	Dysfunctional dendritic cells.
NOG	CIEA NOG mouse®		  	Reduced complement activity, dysfunctional macrophages and dendritic cells, deficiencies in immune signalling, including cytokine production. The most immune deficient mouse available.

**KEY:**

-  Black and White Nude
-  Black Nude
-  Albino Nude
-  White-bellied agouti
-  Black
-  Albino
-  T Cell Deficient
-  B Cell Deficient
-  NK Cell Deficient

\* Lacks P450 activity in liver

° Model is cryopreserved

# Take Your Research Further

## GEMs DESIGN

Taconic Biosciences Genetically Engineered Models (GEMs) Design empowers our clients to develop research models specifically suited to the unique needs of their discovery and development studies or therapeutic programs.

- Gene Inactivation
- Gene Mutation or Replacement
- CRISPR Gene Editing
- Transgene Expression
- miRNA Expression
- Cohort Production Packages

## PRECISION RESEARCH MODELS

Research organizations demand precision tools that better reflect human physiology. Taconic Biosciences leads the field delivering innovative solutions to meet these continually evolving needs. Our core competencies include the delivery of complex strategies that both integrate human genetic sequences and engraft human cells and tissues into custom mouse and rat models.

- Human Gene Replacement
- Human Cell and Tissue Engraftment

## GEMs MANAGEMENT

Taconic's fully integrated GEMs Management brings innovative models from design to study-ready cohorts with unprecedented speed and transparency.

- Embryology
- Rapid Colony Expansion
- Contract Breeding
- Surgical Services
- Tissue Collection
- Genotyping and Molecular Analysis
- Microbiome and Germ-Free Research Models and Services

## CHOOSE TACONIC

For more than 60 years, Taconic has anticipated the needs of the scientific community to deliver models and services that meet the diverse needs of biomedical and biopharmaceutical researchers.

Today that forward thinking and commitment to working collaboratively has resulted in a client-centric environment infused with a knowledge bank that allows you to select the optimum model for your study based on informed insight into the generation of genetically engineered mouse and rat models.

## YOUR COLLABORATIVE PARTNER

As a full-service biosciences company, Taconic can help you acquire, test, develop, breed, cryopreserve, prepare, and distribute highly relevant research lines worldwide. Whether you require custom genetically engineered, cell or tissue engrafted models or traditional models, Taconic's scientists will partner with you to rapidly and efficiently deliver the highest quality models.

## TALK TO A SCIENTIST

Our scientific teams are happy to meet and talk with you about the most efficient way to achieve your study goals. Working in partnership with clients the world over, our scientific teams offer expert advice that can help you speed up your research and reduce your overall costs.

## TALK TO A REPRESENTATIVE

For general information, you can talk to a member of our customer service team. Our customer service team is here to help you make the right decisions and get the models you need fast. Contact us at [info@taconic.com](mailto:info@taconic.com)

## VISIT TACONIC.COM

For more information on the entire Taconic portfolio of products and services designed to help further your research, visit [taconic.com](http://taconic.com)

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