

# Humanized Immune System Mice

For researchers looking to discover a new drug using humanized models, Taconic uniquely combines access to a robust portfolio with application expertise to ensure correct study design.

Taconic's NOG Portfolio includes a suite of severely immunodeficient mouse models which accept the engraftment of heterologous cells more readily than traditional immunodeficient models, making them exceptional hosts for the production of mice with human immune systems.

## ACCESS

- ▶ Simple terms of use for academia, pharma, biotech, and CROs, including use in academia-industry collaborations and sponsored or contract studies

## ROBUST PLATFORM

- ▶ A portfolio of study-ready immune system models and advanced host models for humanization
- ▶ Portfolio has broadest potential applications as evidenced by wide adoption by pharma and biotech

## APPLICATION EXPERTISE

- ▶ PhD Field Applications Scientists provide expertise on experimental design and selection of ideal humanized models
- ▶ Drug discovery-relevant application data generated via industry collaborations

Get in touch for more information about our products and services.

US: 1-888-822-6642 | EU: +45 70 23 04 05 | [info@taconic.com](mailto:info@taconic.com) | Learn more at [taconic.com/humanized-mice](https://taconic.com/humanized-mice)

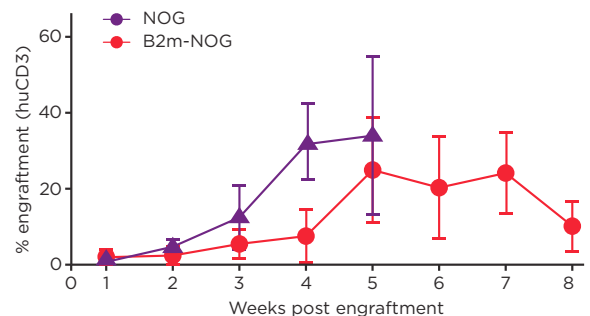
# Taconic Offers Four Immune System Engrafted Models

## huPBMC-NOG & huPBMC-B2m-NOG

NOG or B2m-NOG mice engrafted with human peripheral blood mononuclear cells (PBMCs).

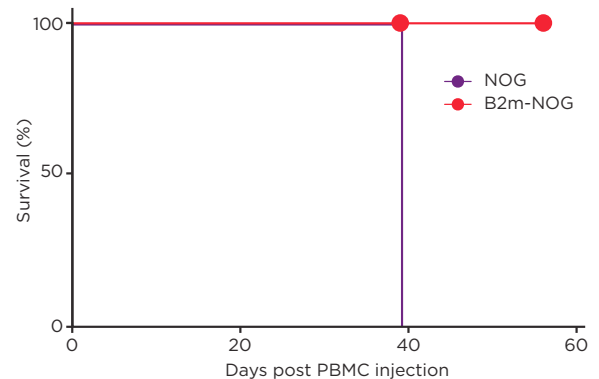
- ▶ Made-to-order and shipped within one week of injection
- ▶ Model for investigation of adult/mature cell populations
- ▶ NOG mice efficiently engraft both human peripheral blood mononuclear cells (PBMCs) and human tumors, permitting immuno-oncology efficacy studies. However, Graft vs. Host Disease (GvHD) develops within 4-6 weeks, limiting the useful study window. B2m-NOG mice have markedly delayed GvHD onset after human PBMC engraftment, providing an expanded study window (8+ weeks). This vastly increases the utility of the model in immuno-oncology experiments.
- ▶ GvHD response can be used as a screening system for T cell modulating drugs
- ▶ Inquire about options such as irradiation, PBMCs of specific donor HLA types, or patient-derived PBMCs

### PBMC Engraftment Kinetics



NOG and B2m-NOG mice engrafted via IV tail vein injection using  $1 \times 10^7$  human PBMCs from a single donor

### B2m-NOG Has Extended Survival Compared to NOG Following Human PBMC Engraftment



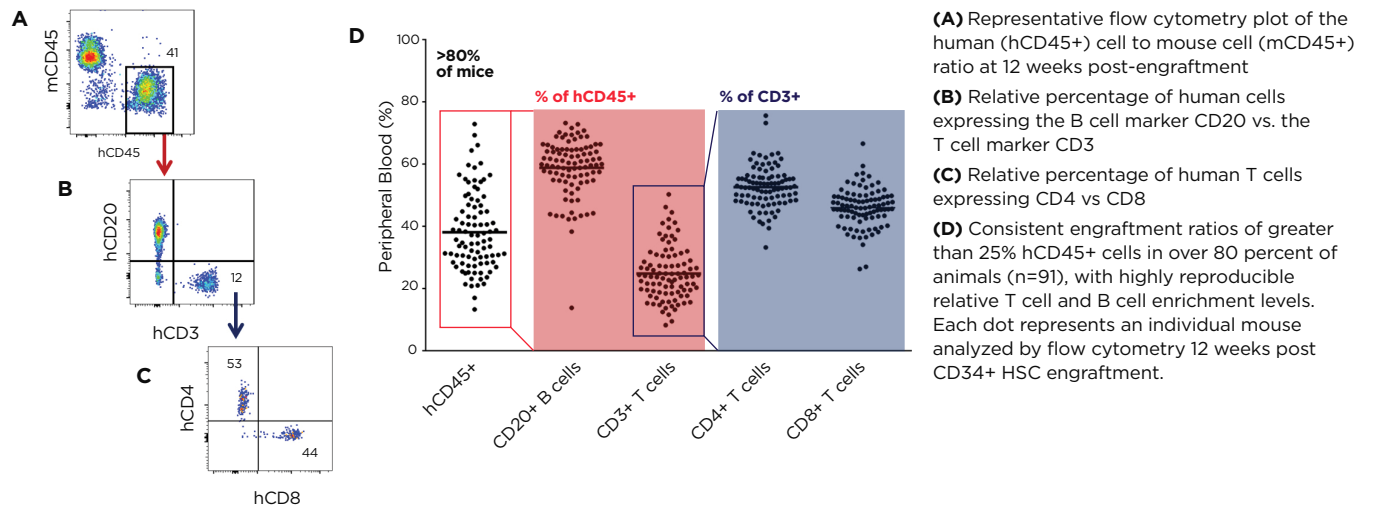
Adapted from Verma et al. 2019

## huNOG

A humanized model with stable, long-term engraftment of human lymphoid cells made by engrafting NOG mice with human CD34+ hematopoietic stem cells (HSCs).

- ▶ Stable engraftment of multiple cell lineages by 12–16 weeks post-injection
- ▶ Long-term engraftment enables long-term studies
- ▶ Only mice with  $\geq 25\%$  hCD45+ in peripheral blood are delivered

### Flow Cytometry Analysis of Human Cell Lineages After CD34+ HSC Engraftment



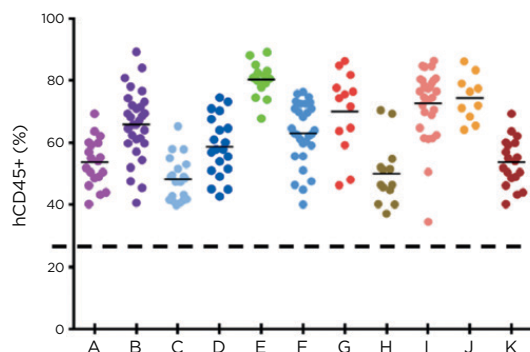
Live inventory available for immediate delivery.

## huNOG-EXL

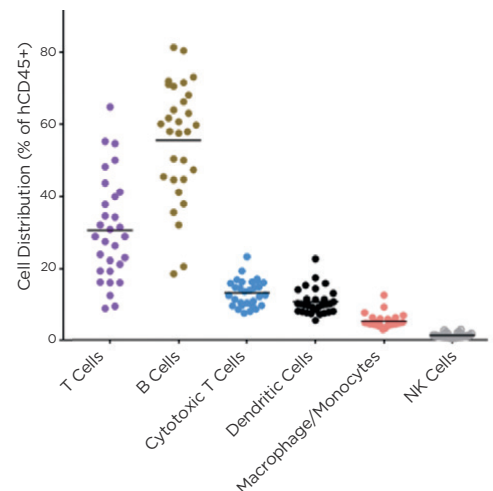
A next-generation NOG mouse, expressing human cytokines that enhance immune system humanization, engrafted with CD34+ HSCs and available at study-ready ages and quantities.

- ▶ Confirmation of stable engraftment with significant improvement in myeloid lineage reconstitution and overall cellularity
- ▶ Publications confirm the infiltration of myeloid cells into the tumor microenvironment and non-lymphoid tissues as well as the functionality of myeloid cells (ex. mast cells)
- ▶ Only mice with  $\geq 25\%$  hCD45+ in peripheral blood are delivered
- ▶ Long-term engraftment enables long-term studies
- ▶ Custom options for huNOG-EXL generation and assessment of engraftment are available, such as HLA matching and age of engraftment

### High Humanization Rate is Observed Across Multiple Donors in huNOG-EXL



### huNOG-EXL Mouse Supports Development of Both Myeloid and Lymphoid Cells



# THE COMPLETE SOLUTION

## MODELS TO DRIVE DRUG DISCOVERY

Taconic Biosciences is uniquely positioned to enable drug discovery through animal models by being the only company that partners with customers to provide expertise, quality, and availability, along with downstream services:

- ▶ Expertise at every step
- ▶ Highest quality standards in the industry
- ▶ Availability and access to drive global research

## MODEL GENERATION SOLUTIONS

Taconic's Model Generation Solutions empower our customers with a unique combination of capabilities, specifically tailored to each individual discovery program:

- ▶ Most experienced model generation and breeding company
- ▶ Most comprehensive toolkit
- ▶ Exclusive programs
- ▶ Concierge approach to partnering with customers

## COLONY MANAGEMENT SOLUTIONS

Taconic's fully-integrated colony management solutions bring innovative models from design to study-ready cohorts with unprecedented speed and transparency:

- ▶ Most experienced model generation and colony management company
- ▶ The complete toolkit
- ▶ Colony management solution process
- ▶ Partnering with our customers
- ▶ Expanded applications and opportunities

## YOUR PARTNER

### WHAT WE DO

Taconic Biosciences is a fully-licensed, global leader in genetically engineered rodent models and services. Founded in 1952, Taconic provides the best animal solutions so that customers can acquire, custom-generate, breed, precondition, test, and distribute valuable research models worldwide.

### WHO WE ARE

Taconic has created a unique ecosystem of experts to provide our customers with the best animal model solutions. Whether it is choosing the right model for your study, designing a custom model, creating an efficient breeding plan, or providing expertise in critical support functions like veterinary science, genetics, and embryology; Taconic is ready to help you drive your research from idea to cure.

### CONTACT US

To get started, contact one of our customer service team members. Contact us at [info@taconic.com](mailto:info@taconic.com).

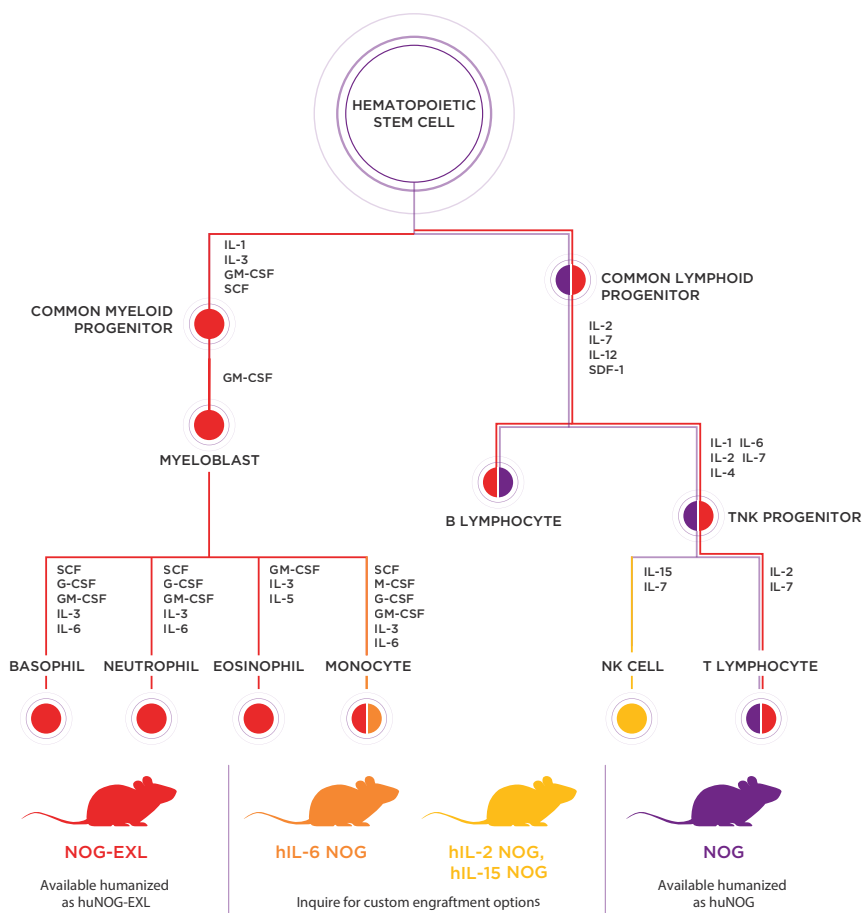
### VISIT TACONIC.COM

There is so much more to learn. Visit [taconic.com](http://taconic.com) to see our full breadth of animal model solutions and valuable resources.



## HEMATOPOIESIS & IMMUNE SYSTEM ENGRAFTED MICE

The NOG Portfolio consists of a suite of mice which support the engraftment and/or differentiation of various human immune cell types.



Visit [taconic.com/humanized-mice](http://taconic.com/humanized-mice) for more information.

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