

# huNOG-EXL

## A Humanized Immune System Mouse Supporting Both Myeloid and Lymphoid Cells

The huNOG-EXL supports superior levels of human cell engraftment and the differentiation of both human myeloid and lymphoid cells, and it offers a longer average lifespan compared to competing myeloid-supportive humanized immune system (HIS) models.

Taconic Biosciences® portfolio of HIS mice offers two variations of the huNOG-EXL model in order to provide greater study design flexibility: The huNOG-EXL SA (Standard Access) and huNOG-EXL EA (Early Access).

The huNOG-EXL is available with easy access for academia, pharma, biotech, and CROs, including use in academia-industry collaborations and sponsored or contract studies. Expert support from Taconic's Field Applications Scientists, plus data from collaborations and R&D across a range of therapeutic areas, supports the successful application of the huNOG-EXL in your research program.

### huNOG-EXL SA (STANDARD ACCESS)

Animals ship following human immune cell reconstitution

### huNOG-EXL EA (EARLY ACCESS)

Animals ship prior to human immune cell reconstitution

## WHICH huNOG-EXL VERSION IS RIGHT FOR YOU?

### huNOG-EXL SA

For researchers who want access to live inventory for immediate delivery, the huNOG-EXL Standard Access is the ideal approach, particularly for experiments with shorter timelines or studies that must start as soon as possible.

### huNOG-EXL EA

For researchers with certain experimental designs or logistical hurdles, early access to huNOG-EXL mice soon after engraftment may be advantageous, particularly for longer study timelines which may push the bounds of the useful study window in these mice.

## WHAT ARE THE KEY DISTINCTIONS BETWEEN THE MODELS?

### huNOG-EXL SA

- ▶ Shipped after human immune cell chimerism is established in the periphery
- ▶ Shorter study window after receipt by customer
- ▶ Live inventory available for immediate delivery
- ▶ All mice shipped meet a specified QC standard of  $\geq 25\%$  hCD45 in peripheral blood at 10 weeks post-engraftment

#### Key Therapeutic Areas for huNOG-EXL

- ▶ Immuno-oncology
- ▶ Autoimmune disease
- ▶ Immuno-toxicology/safety assessment

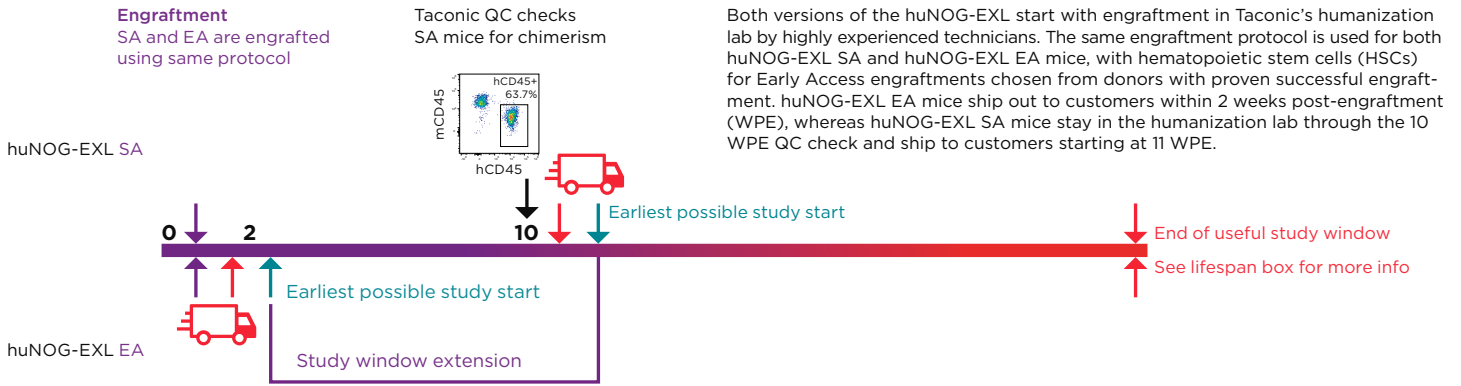
### huNOG-EXL EA

- ▶ Made to order and shipped within 2 weeks post-engraftment, prior to human immune cell reconstitution in the periphery
- ▶ Maximizes potential study window
- ▶ Ideal for engraftment of slow growing tumors, longer treatment paradigms or various study customizations
- ▶ Allows experimental start prior to emergence of T cells or during the peak B cell window
- ▶ Shipped without flow cytometry QC by Taconic, allowing customer to perform QC relevant to specific experimental design (timing and markers)
- ▶ While lot failures are expected to be rare, individual mice may fail to develop significant human chimerism

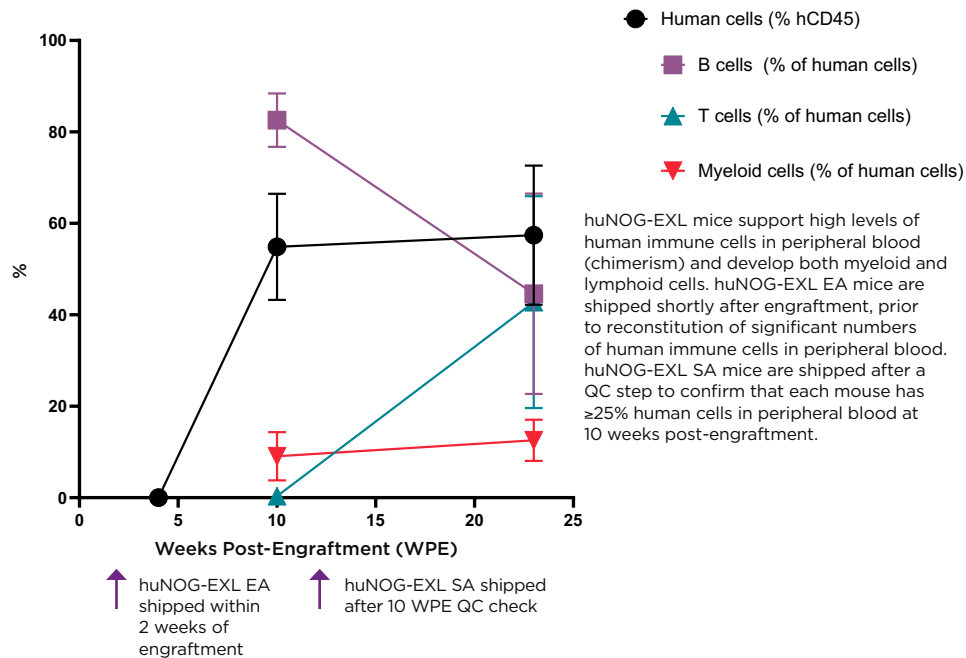
Get in touch for more information about our products and services.

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# huNOG-EXL SA AND EA TIMELINE COMPARISON



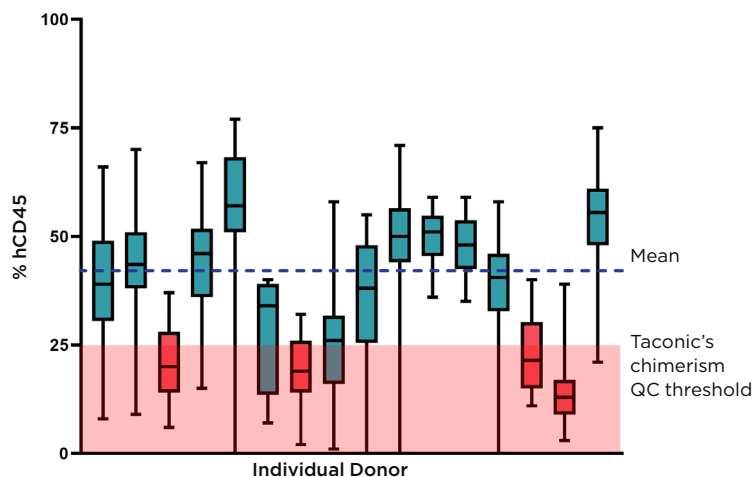
## KINETICS OF HUMAN IMMUNE CELL RECONSTITUTION IN huNOG-EXL (PERIPHERAL BLOOD)



### Lifespan in Myeloid-Supportive HIS Mice

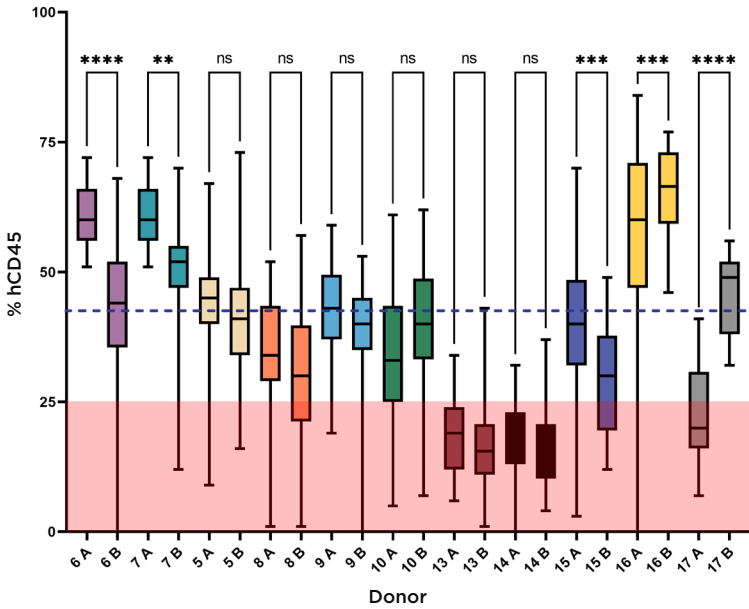
All myeloid-supportive HIS mice have limited lifespans due to a range of outcomes including anemia, thrombocytopenia, macrophage activation syndrome and hemophagocytic lymphohistiocytosis. The huNOG-EXL has the longest demonstrated lifespan compared to competing models, but this varies by donor and can be impacted by environmental and experimental factors. Contact Taconic for guidance on housing and husbandry. While Taconic has observed that huNOG-EXL mice can often survive for 30+ weeks post-engraftment (WPE), researchers should plan for a typical study window of 26-30 WPE.

## HOW TACONIC ADDRESSES HIS MOUSE VARIABILITY



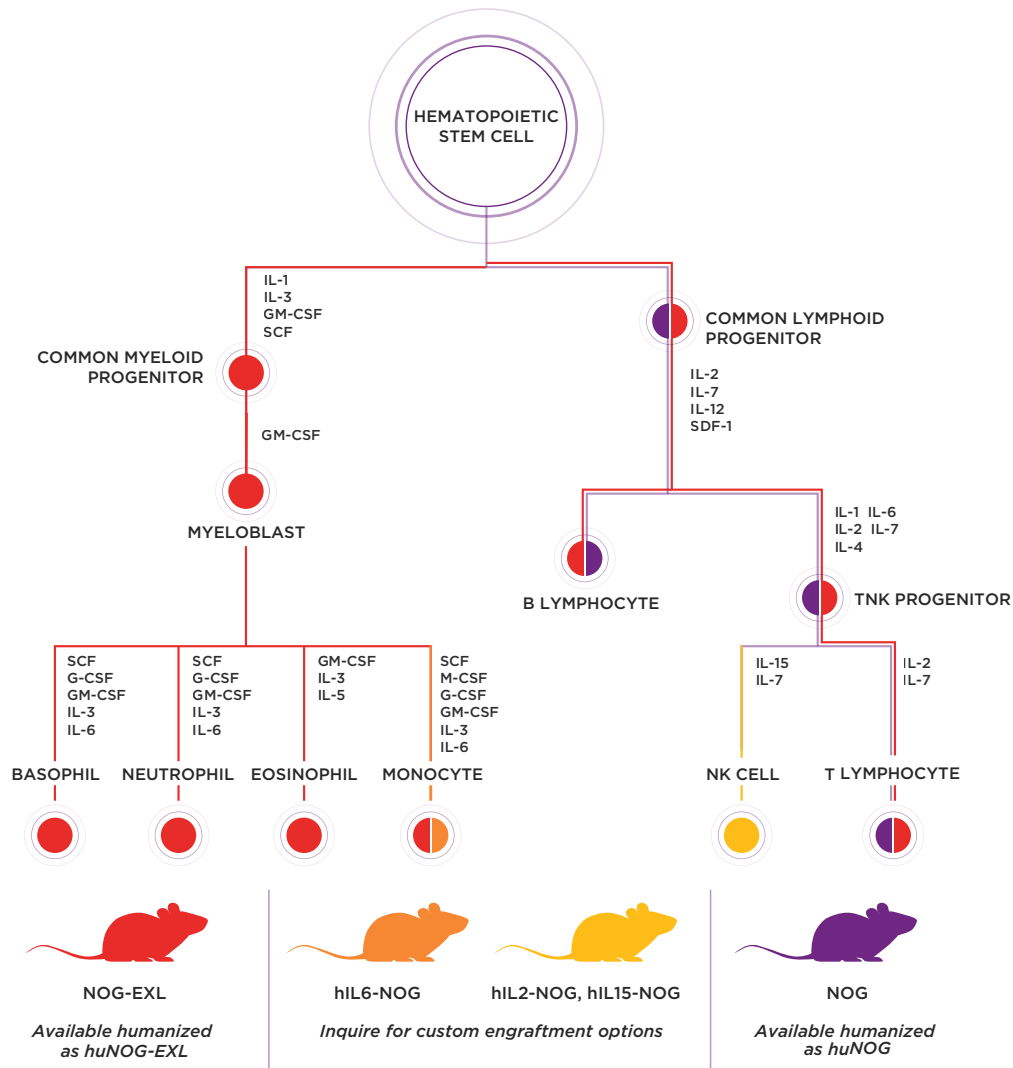
Donor characteristics impact human immune system reconstitution in huNOG-EXL mice, including chimerism levels and frequencies of specific human immune cell types. For huNOG-EXL SA, lots for which the mean falls below Taconic's 25% chimerism threshold are disqualified from sale (lots shown in red). For lots with a mean above the threshold (shown in blue), any individual animals in the lot which score below 25% are disqualified from sale. For huNOG-EXL EA, Taconic selects donors that have previously been validated to reduce the risk of lot failure. Taconic's Field Application Scientists can help you design a successful study plan which appropriately accounts for both inter- and intra-donor variation in HIS mice.

# huNOG-EXL EA MICE ARE ENGRAFTED USING DONOR CELLS WITH PROVEN ENGRAFTMENT SUCCESS



HSCs from the same donor were engrafted twice, on separate days (A and B), to generate two lots of huNOG-EXL mice per donor. The ability of a donor to produce lots where most mice either met or failed the QC threshold of  $\geq 25\%$  chimerism was replicated between duplicate lots, with one exception in this test set. To make huNOG-EXL EA mice, Taconic chooses donors with proven engraftment success in order to reduce the risk of lot failure.

## HEMATOPOIESIS AND HUMANIZED IMMUNE SYSTEM MICE



huNOG-EXL mice develop human myeloid and lymphoid lineages.

**Contact Taconic for more information on the presence and functionality of your cell type of interest.**

# 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.

# Complex Experiments Require Complex Models

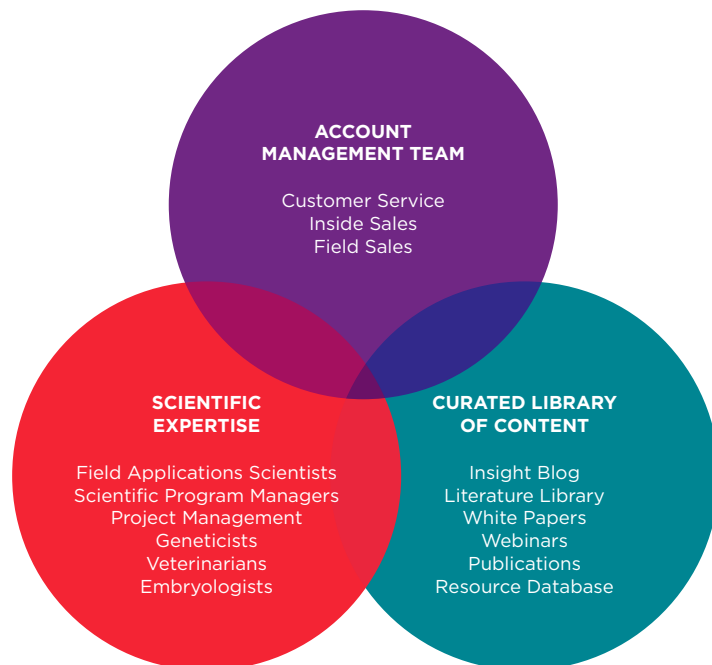
## Let Us Help You Select the Right One

### THE TACONIC DIFFERENCE — LET US PARTNER WITH YOU

- ▶ PhD-level Field Applications Scientists provide critical expertise to maximize your success. Let us help you with selection of the most appropriate model and experimental design.
- ▶ Application data available through collaborations with industry and academia covering a wide range of therapeutic areas.
- ▶ Sold under a simple label license for easy access — no MTA or license fee required to access the huNOG-EXL and other HIS models. Models available for internal research as well as sponsored and contract research.

### ECOSYSTEM OF SUPPORT

Our cross-functional team aligns to provide an ecosystem of support that empowers customers with the best solution.



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

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