



Recommended Care and Housing for the CIEA NOG mouse[®]

Production at Taconic:

The CIEA NOG mouse[®] (NOG) is severely immunodeficient. Taconic and CIEA recommend the highest level of care possible for this mouse model. Taconic currently produces these mice both in flexible-film isolators at the [Defined Flora](#) health standard using strict gnotobiotic techniques as well as in barriers at the [Excluded Flora](#) and [Opportunist Free[™]](#) health standards. A current health report may be viewed [online](#).

At Taconic, all items that enter gnotobiotic isolators are steam sterilized, including the feed and drinking water. Mice are housed in polycarbonate cages with wire bar lids (gnotobiotic isolator), polycarbonate cages with wire bar lids and filter tops or individually ventilated cages (barrier production). In barrier settings, all caging components and feed are steam sterilized prior to entering the barrier. For both isolators and barriers, potable groundwater is passed through a series of filters (5 micron, 2.5 micron, 0.2 micron), filled into water bottles and then autoclaved. Barrier cage handling practices are designed to maintain individual cage level biosecurity practices.

Recommendations for maintenance by users:

1. All materials for housing or experimentation ideally should be sterilized by autoclave; alternatively, they may be chemically disinfected or irradiated.
2. Microbiological monitoring should be performed regularly. Testing should include opportunistic agents. The globally harmonized Taconic [International Health Monitoring System[™]](#) (IHMS[™]) can supply the confidence needed to work with immunodeficient models.
3. NOG mice should be housed in the cleanest portion of the animal facility. If possible, maintain the NOG mice in their own room or in an immunodeficient mouse room.
4. Personnel movement policies are important to reduce the chance of contamination. The most desirable arrangement is to have dedicated personnel for the NOG mouse room. If separate technicians are not available to care for the NOG mice only, then personnel should enter the room housing the NOG mice prior to going into areas which have a lower health status. They should not return to the NOG mouse room during the same day unless proper personnel decontamination procedures have taken place.
5. Illness or other adverse effects may be linked to infection by opportunistic agents or excessive stress on the mice. Care should be taken to maintain a high health standard and minimize stress on the mice.
6. As with other immunodeficient models, the NOG mouse may benefit from housing in microisolator cages, such as individually ventilated cages. Using proper decontamination procedures between the changing of cages is recommended. One such approach is to use forceps that are disinfected before use with each new cage to pick up the tail of the mouse.
7. Move animals to a class II laminar flow hood for cage changes and research protocols. Cages can also be changed in HEPA-filtered animal cage change

stations.

8. Irradiation of the NOG mouse should be performed in a sterilized primary container. Mice with scid mutations are radiation sensitive; minimal irradiation is recommended and avoid irradiation if not needed. Please contact Taconic for information on recommended radiation doses and suggested starting points for evaluation of appropriate radiation dose for particular experimental setups.
9. NOG mice are generally non-aggressive and may be group housed, including males.
10. Taconic does not recommend prophylactic antibiotic treatment of NOG or other immunodeficient mice for many reasons, including concerns about increasing antibiotic resistance and intestinal dysbiosis.

Tips for acclimation

NOG mice may have difficulty transitioning to a new diet or water source upon receipt in your facility. Taconic feeds NOG mice the [NIH #31M](#) diet. To assist NOG mice in transitioning to a new diet, mix in some pelleted NIH #31M diet with the new diet. The NIH #31M diet is an open source diet which may be obtained from various vendors. Taconic uses water bottles in all NOG colonies. NOG mice may have difficulty transitioning to different types of water bottles or lixits for automatic watering systems. Providing supplementary hydration gel in the bottom of the cage during the acclimation period may prevent dehydration.

[Contact Taconic](#) for any questions regarding the above recommendations. Requirements for care will vary by facility. Please consult your veterinarian or facility manager for more information on working with immunocompromised animals.