





Brown Norway Rat

Nomenclature

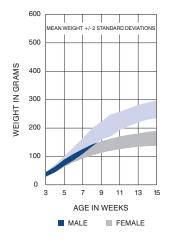
BN/Crl

Coat Color Non-agouti brown

MHC Haplotype RT1n

Breeding Locations Germany, USA

> Strain Code 091



Origin

Silvers and Billingham began brother x sister matings with selection for histocompatibility in 1958 from a brown mutation in a stock of wild rats maintained by King and Aptekman in a pen-bred colony of rats trapped from the wild in 1930 by King at the Wistar Institute. To Charles River from Radiobiology Institute, Netherlands, in 1976.

Research Applications

Genetic mapping, respiratory inflammation, retina degeneration, immunological dysfunction, aging, transplantation research.

One key benefit of using the Brown Norway rat in respiratory work is its consistent response in allergic models. Its unique lung immunology and pathophysiology makes it distinctive among rat strains.

References

Wagner, E. M. et al. Angiogenesis and Airway Reactivity in Asthmatic Brown Norway Rats. Angiogenesis. 18(1), 1-11 (January 2015).

Chapman, R. W. et al. Pharmacology of a potent and selective inhibitor of PDE4 for inhaled administration. *The European Journal of Pharmacology*. **643**(2-3), 274-81 (September 2010).

Lin et al. Hypersensitivity of vagal pulmonary C-fibers induced by increasing airway temperature in ovalbumin-sensitized rats. The *American Journal of Physiology* — *Regulatory, Integrative and Comparative Physiology*. **309**(10), R1285-91 (November 2015).

Down, K. et al. Optimization of Novel Indazoles as Highly Potent and Selective Inhibitors of Phosphoinositide 3-Kinase & for the Treatment of Respiratory Disease. *Journal of Medicinal Chemistry*. **58**(18), 7381-7399 (August 2015).

Ramis et al. A novel inhaled Syk inhibitor blocks mast cell degranulation and early asthmatic response. *Pharmacological Research*. **99**, 116-24 (September 2015).

Pauluhn, J. et al. Development of a respiratory sensitization/elicitation protocol of toluene diisocyanate (TDI) in Brown Norway rats to derive an elicitation-based occupational exposure level. *Toxicology.* **319**, 10-22 (May 2014).

EVERY STEP OF THE WAY