



## p75NTR knockout rat

|              |                                    |
|--------------|------------------------------------|
| Model        | p75NTR knockout rat                |
| Strain       | HsdSage:SD-Ngfr <sup>tm1Sage</sup> |
| Location     | U.S.                               |
| Availability | Cryopreserved                      |

### Characteristics/husbandry

- + Homozygous knockout rats exhibit complete loss of p75NTR protein
- + p75NTR knockout rats show hyposensitivity to thermal pain via hot plate assay
- + p75NTR knockout rats show increased reactivity to touch in a functional observational battery (Irwin)
- + Background strain: Sprague Dawley

### Zygoty genotype

- + Cryopreserved as heterozygous embryos

### Research use

- + Pain
- + Nociception
- + Analgesia
- + Neuronal development

### Origin

The p75NTR KO rat model was originally created at SAGE Labs, Inc. in St. Louis, MO and distributed out of the Boyertown, PA facility. The line continues to be maintained through the original SAGE Labs animal inventory acquired by Envigo.

### Description

This model contains a biallelic deletion of the *Ngfr* gene, encoding for the p75 neurotrophin receptor (p75NTR). Along with TrkA, p75NTR is a receptor for the nerve growth receptor and is important in nociception. The p75NTR knockout rat is useful for pain research.

NGF dysfunction has been linked to neuropathic and osteoarthritic pain along with hyperalgesia. Inhibition of NGF, including inhibition of the p75NTR, is being pursued as a potential analgesic.

Figure 1: Thermal insensitivity in p75NTR knockout rats. p75NTR knockout rats show increased foot licking latency in the hot plate test. | \*\*\* =  $p < 0.001$ .

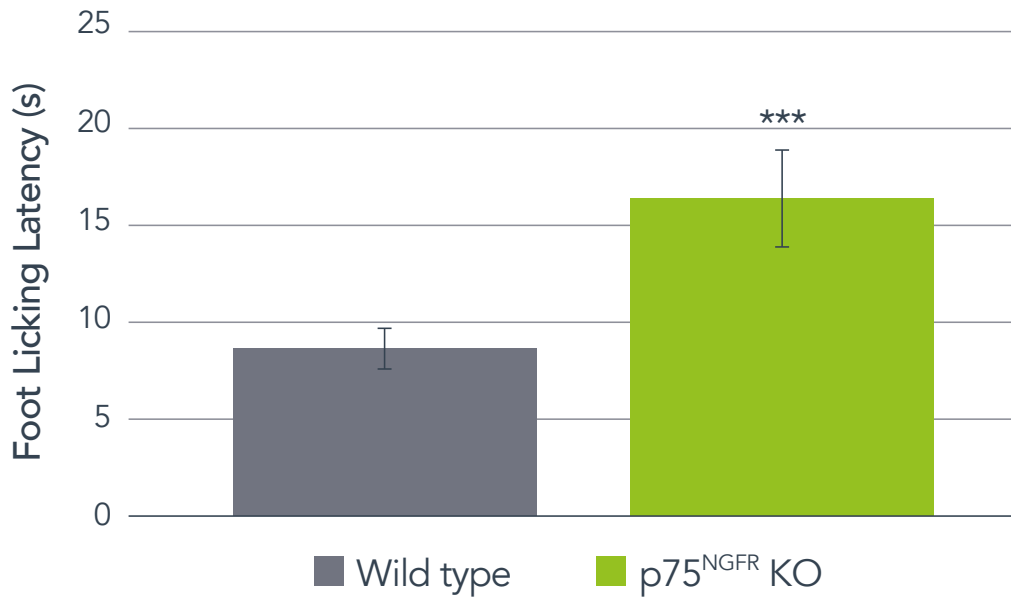
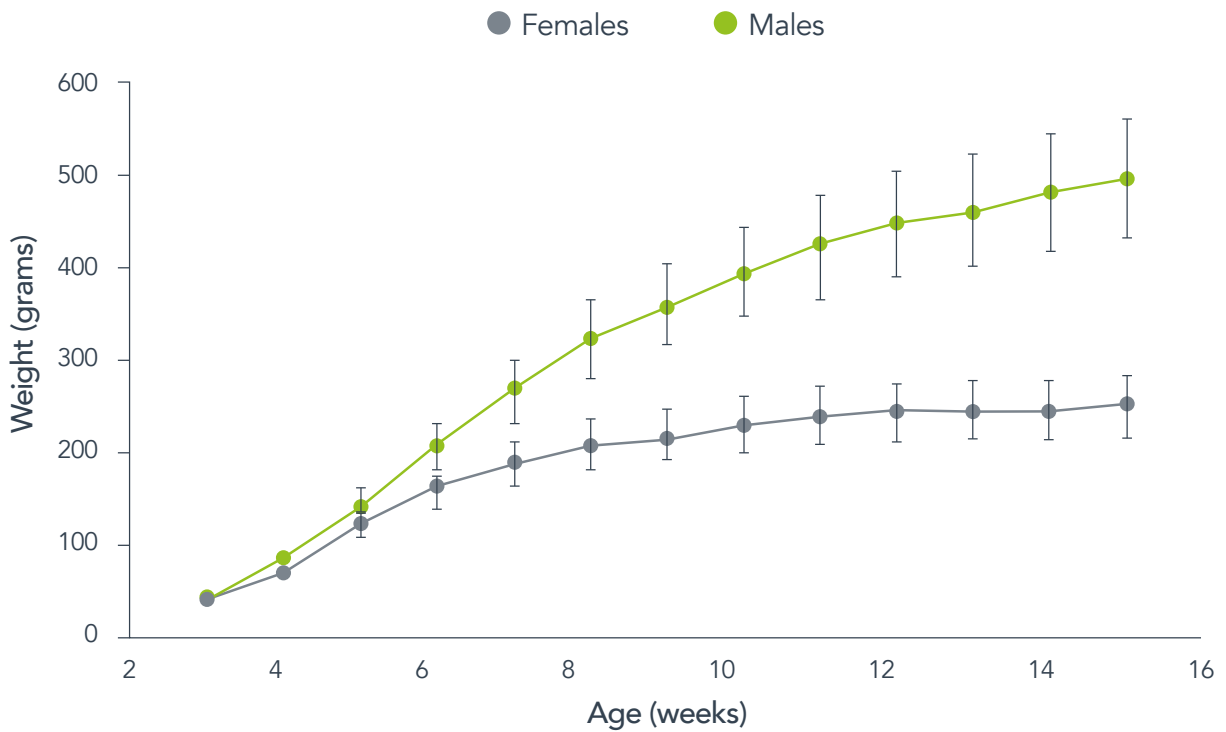


Figure 2: Age and weight comparison chart



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