

Alpha-Synuclein SNCA knockout rat



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| MODEL | Alpha-Synuclein SNCA knockout rat |
| STRAIN | HsdSage: SD-SCNA ^{em1Sage} |
| LOCATION | U.S. |
| AVAILABILITY | Live colony |

CHARACTERISTICS/HUSBANDRY

- Background strain: Sprague Dawley

ZYGOSITY GENOTYPE

- Homozygous

RESEARCH USE

- Parkinson's disease
- Dopaminergic cell toxicity

ORIGIN

The Alpha-Synuclein SNCA knockout rat model was originally created at SAGE Labs, Inc., in St. Louis, MO. The animal inventory was acquired by Envigo in 2019 and then by Inotiv in 2021. The line continues to be maintained through the original SAGE Labs animal inventory and is distributed out of the Boyertown, PA, facility.

DESCRIPTION

Developed in collaboration with The Michael J. Fox Foundation, this model contains a deletion of the endogenous rat SNCA gene, encoding the alpha-synuclein protein. This model was generated using the CRISPR/Cas9 genome targeting strategy. Mutations and multiplications of the SNCA gene have been linked to early-onset Parkinson's disease (PD), making this model useful for understanding alpha-synuclein biology and PD pathogenesis.