



hApoE4 knockin rat

Model	Alpha-Synuclein A53T SNCA knockin rat
Strain	HsdSage:SD-ApoE4 ^{tm1(hApoE4)} Sage
Location	U.S.
Availability	Live colony

Characteristics/husbandry

- + Background strain: Sprague Dawley
- + Homozygous replacement of the Rat ApoE gene with the Human ApoE4 gene

Zygoty genotype

- + Homozygous

Research use

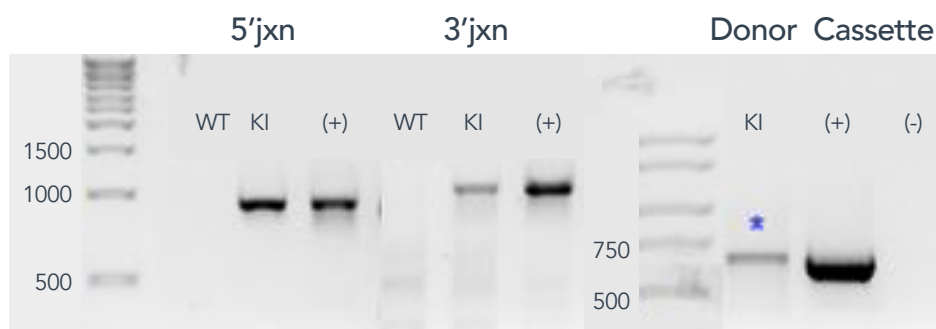
- + Alzheimer's disease
- + Neurodegenerative diseases

Origin

Apolipoprotein E (ApoE) is a critical apoprotein of the chylomicron which binds to a specific receptor on liver cells and peripheral cells. Additionally, the 4 allele of ApoE (ApoE4) is a major risk factor for Alzheimer's disease (AD), with possession of at least one ApoE4 allele in 40-65% of patients with AD and a patient with 2 ApoE4 alleles having up to 20 times the risk of developing AD.

ApoE4 has been implicated in Alzheimer's disease and cognition, making this a useful model for the study of atherosclerosis, Alzheimer's and nerve injury.

Figure 1: Humanized Knock-in Validation of the ApoE4 5' junction, 3' junction, and Donor Cassette via PCR. PCR analysis to show targeted integration of the humanized donor cassette.



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