ENVIGO

Genetically engineered models (GEMS)

hApoE3 Knock-in Rat

Model	Humanized ApoE3 KI
Strain	SD- KI-ApoE3^{tm1sage}
Availability	Live colony

Characteristics/husbandry

+ Background Strain: Sprague Dawley
+ Location: US

Zygosity genotype

+ Homozygous

Research use

+ Alzheimer's disease
+ Dopaminergic cell toxicity

Description

Human apolipoprotein E (ApoE) is primarily present in the liver, kidney, and spleen, where it plays a critical role in cholesterol and lipid transport and metabolism. In the central nervous system, ApoE is synthesized and secreted by astrocytes, microglia, and neurons where it is involved in injury repair. Human ApoE (hApoE) exists as three major isoforms, ApoE2, ApoE3 and ApoE4, which are the products of three alleles at a single gene locus on the long arm of chromosome 19 in the human. hApoE2 is thought to be protective of AD, hApoE3 seems to be WT or neutral, and hApoE4 appears to yield a higher incidence for Alzheimer's disease. In this hApoE3 knock-in rat, the rat endogenous ApoE codon region is replaced with the corresponding part of human ApoE3.

Contact us

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