

[Mouse Models](#) [SCA31](#) [Publication](#)

Tk2^{-/-} KO mice (no ataxia phenotype)

IDENTIFICATION

| | |
|-------------------------|-------------------------------|
| Causal gene(s) | BEAN1/TK2 |
| Repeat size or mutation | Homozygous Tk2 knock-out mice |
| Animal model | Mouse |

MODEL DETAILS

| | |
|---------------------------|----------|
| Mouse strain / background | C57BL/6J |
| Type of model | Knockout |

TRANSGENIC CONSTRUCT

| | |
|-------------------------------------|---|
| Transgenic construct: sequence type | Replacement of exon 4 and part of exon 5 of the Tk2 gene by a neomycin resistance cassette |
| Transgenic construct: details | A targeting vector containing exon 3 till 6 of the Tk2 gene, the region containing exon 4 and 5 (bp 7066-9753) was replaced by a neomycin resistance cassette |

PHENOTYPE

| | |
|-------------------|---|
| Progression | Progressive |
| Hallmark features | Growth retardation, high rate of early mortality, hypothermia, progressive depletion of mtDNA levels, cardiomyopathy, lipodystrophy |

SOURCE & PUBLICATIONS

| | |
|---|--|
| Originating lab / institution | Karolinska Institute |
| Links to publications or public resources | Progressive loss of mitochondrial DNA in thymidine kinase 2-deficient mice - PubMed https://pubmed.ncbi.nlm.nih.gov/18434326/ |