TALLYHO mimics many characteristics of human non-insulin-dependent type 2 diabetes mellitus (NIDDM). Male TALLYHO mice can develop hyperglycemia, hyperinsulinemia, hyperlipidemia, moderate obesity, and enlargement of the islets of Langerhans, however, the phenotype is less than 100% penetrant.
Details

Detailed Description

TALLYHO mimics many characteristics of human non-insulin-dependent type 2 diabetes mellitus (NIDDM). Male TALLYHO mice can develop hyperglycemia, hyperinsulinemia, hyperlipidemia, moderate obesity, and enlargement of the islets of Langerhans, however, the phenotype is less than 100% penetrant. Onset of hyperglycemia is delayed compared to ob/ob (B6.V-Lep^ob^ob^) and db/db (BKS.Cg-m+/+ Lepr^db^db^) mice beginning between 10 and 14 weeks of age. Female mice display moderate hyperinsulinemia, hyperlipidemia, and obesity but do not manifest overt diabetes (i.e. hyperglycemia). Chromosomal mapping identified a major diabetes susceptibility locus on Chromosome 19, designated Tanidd1 for TH-associated NIDDM. Breeding and mapping data suggest Tanidd1 is a single recessively inherited gene primarily responsible for the hyperglycemia phenotype in TALLYHO mice. Tanidd1 interacts with other loci including Tanidd2 on Chromosome 13, Tanidd3 on Chromosome 15, Tabw2 (TallyHo-associated body weight) on Chromosome 7, and Tafat (TallyHo-associated fat pad)(Kim et al., 2001).

Development

Control Suggestions

Selected References

Genetics

Tanidd2 TALLYHO/Jng

Tanidd3 TALLYHO/Jng

Tanidd1 TALLYHO/Jng
Tabw2\textsuperscript{TALLYHO/Jng}

Tabw\textsuperscript{TALLYHO/Jng}

Tafat\textsuperscript{TALLYHO/Jng}

### Disease/Phenotype

#### Disease Terms

#### Research Areas By Phenotype

#### Mammalian Phenotype Terms by Genotype

#### Phenotype Information

#### References

### Technical Support

**Genotyping Protocols**

*Genotyping resources and troubleshooting*

Inbred mouse strains are maintained through sibling (sister x brother) matings; no genotyping required.

**Dietary Information**

*LabDiet® 5K52 formulation (6% fat)*

**Breeding Considerations**

This strain is an exceptional breeder.

This strain is maintained by brother x sister matings. Because the phenotype is not fully penetrant, it is important to continually monitor for overt hyperglycemia in male mice. Mice available from The Jackson Laboratory are the progeny of a proven diabetic male. Male breeders in our colony are tested for hyperglycemia at 14 weeks of age. Publications on TallyHo mice should note the current generation of inbreeding. For TallyHo colonies maintained independent of The Jackson Laboratory (TJL), the generation number is denoted by the generation of the original breeder pairs obtained from TJL followed by the number of generations bred independently (e.g. F7NE4F7+3).

Please note, SWR/J (Stock No. 000689) is recommended as the "normal" genetically related control for TALLYHO/JngJ mice; the two strains share 86.8% of their genotype and 67.1% of their haplotype based on TALLYHO/JngJ single nucleotide polymorphism (SNP) alignment with Swiss family strains.

**Additional Breeding and Husbandry Support**
Mating System  
Sibling x Sibling

Citation
When using the TALLYHO/JngJ mouse strain in a publication, please include JAX stock #005314 in your Materials and Methods section.

Animal Health Reports
Facility Barrier Level Descriptions

AX5 (Standard)

Pricing & Availability

Available Now

Sized to accommodate orders of up to 10 or more with age range. Ask Customer Service for details.

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- All
- By Allele
- By Gene
- By Collection

**All Related Strains**