Also Known As: C3Fe, HeB, C3H Fekete, C3HFe

This general purpose strain shares a common origin with C3H/HeJ and C3H/HeOuJ. Unlike C3H/HeJ, it carries a normal allele at the *Tlr4* locus, but is homozygous for *Pde6b*\(^{rd1}\), which causes retinal degeneration.
Details

Important Note
This strain does not carry mouse mammary tumor virus (MMTV). See JAX® NOTES, May 2000, No. 480. This strain is also homozygous for the retinal degeneration allele $Pde6b^{rd1}$. See article "Genetic Background Effects: Can Your Mice See?". JAX® NOTES Spring 2002, No. 485. A sighted alternative is Stock No. 003648, C3Sn.BLiA-$Pde6b^{+}$/DnJ.

Detailed Description
This general purpose strain shares a common origin with C3H/HeJ and C3H/HeOuJ. Unlike C3H/HeJ, it carries a normal allele at the $Tlr4$ locus, but is homozygous for $Pde6b^{rd1}$, which causes retinal degeneration. This C3H subline lacks the nos5 allele of $Gpr179$ (Chang, 2015). C3HeB/FeJ inbred mice have been found to be extremely susceptible to virulent $Mycobacterium tuberculosis$. They develop pulmonary tuberculosis and die within 25-28 days of infection with $10^5$ CFU of Erdman strain of $M. tuberculosis$ (Kramnik et al, 1998). Several QTL have been identified that contribute to the $M. tuberculosis$ susceptibility (Sissons et al., 2009). The QTL susceptibility to tuberculosis 1 ($sst1$) on Chromosome 1, mapped to a locus that includes the $Sp110$ gene, which was shown to have variable copy number in C3HeB/FeJ and comparatively decreased expression subsequent to TB infection. Transgenic expression of $Sp110$ in macrophages increased resistance to TB in C3HeB/FeJ (Pan et al., 2005, Kramnik, 2008). C3HeB/FeJ has also been found to be susceptible to infection by $Chlamydia pneumoniae$ and $Listeria monocytogenes$ and that susceptibility also maps in part to the $sst1$ locus (Boyartchuk et al., 2004, He et al., 2013). These mice have also been found to be susceptible to $Salmonella typhimurium$ infection (Eisenstein et al., 1982). In response to kainic acid this inbred strain has a low dose tolerance, high rate of induced seizure duration and severity, and high induced mortality rate. None survive induced status epilepticus, and just prior to severe seizures the mice display hyperactivity and running behavior (McKhann et al., 2003).

Selected References

Genetics

Sst1$^{C3HeB/FeJ}$
**C3HFe Mouse Strain Information**

**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.

**Additional Breeding and Husbandry Support**

**Mating System**
Sibling x Sibling

**Appearance**
agouti

**Related Genotype:** A/A

**Citation**
When using the C3HFe mouse strain in a publication, please include JAX stock #000658 in your Materials and Methods section.

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**Animal Health Reports**
Facility Barrier Level Descriptions

- MP16 (Standard)
- RB07 (Maximum)
Pricing & Availability

Sized to accommodate orders of up to 100 or more. Ask Customer Service for details.

Domestic
Internation

Pricing effective for USA, Canada and Mexico shipping destinations

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