CBACaHN-Blxid J

Stock No: 001011 | CBA/N

Inbred Strain

AVAILABLE NOW

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Overview
Also Known As: CBA/N

CBA/CaHN-\textit{Btk}^{xId}J mice have a mutation in the Bruton's tyrosine kinase gene (\textit{Btk}), and are a model of human X-linked immunodeficiency. They have a B-lymphocyte-specific defect that results in an inability to launch an antibody response to thymus-independent type II antigens, although they do produce normal amounts of antibody in response to some protein antigens. They have low serum IgM and IgG3 and a reduced number of B-cells. Moreover, the B-cells that are present have a reduced surface IgM to IgD ratio, which suggests a disorder in B-cell maturation.
CBA/CaHN-\textit{Btk}\textsuperscript{\textit{xid}}/J mice have a mutation in the Bruton's tyrosine kinase gene (\textit{Btk}), and are a model of human X-linked immunodeficiency. They have a B-lymphocyte-specific defect that results in an inability to launch an antibody response to thymus-independent type II antigens, although they do produce normal amounts of antibody in response to some protein antigens. They have low serum IgM and IgG3 and a reduced number of B-cells. Moreover, the B-cells that are present have a reduced surface IgM to IgD ratio, which suggests a disorder in B-cell maturation.
Genotyping Protocols

Pyrosequencing: $Btk^{xid}$
End Point Analysis: $Btk^{xid}$ End Point

Genotyping resources and troubleshooting

The Jackson Laboratory does not have a PCR genotyping assay for the $Btk^{xid}$ mutation. The point mutation is a C to T transition at point 219 (Rawlings DJ et al. Science 1993; 261(5119):358-61 [PMID: 8332901]).

Dietary Information

LabDiet® 5K52 formulation (6% fat)

Breeding Considerations

This strain is an exceptional breeder.

Additional Breeding and Husbandry Support

Mating System

Homozygote x Hemizygote

Appearance

agouti

Related Genotype: $A/A$

Citation

When using the CBA/N mouse strain in a publication, please include JAX stock #001011 in your Materials and Methods section.

Animal Health Reports

Facility Barrier Level Descriptions

MP13 (Maximum)

Pricing & Availability

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<th>AGE</th>
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