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NOD-Rag1^{null}IL2rg^{null}Ins2^{Akita} - Mouse Strain RES1261**Mouse Information**

Common Name:	NOD-Rag1 ^{null} IL2rg ^{null} Ins2 ^{Akita}
MGI Official Name:	NOD.Cg-Rag1 ^{tm1Mom} Ins2 ^{Akita} IL2rg ^{tm1Wjl} /Sz
Description:	Backcrossing of the Rag1 null allele onto the NOD/Lt strain background (NOD-Rag1 ^{null} mice) provided a radio-resistant and longer-lived model for human-cell engraftment. Mutations in X-chromosome-linked Il2rg gene cause X-linked severe combined immunodeficiency (XSCID). Immunodeficient NOD-Rag1 ^{null} IL2rg nullmice tolerated much higher levels of irradiation conditioning than did NOD-Prkdcscid IL2rg ^{null} mice. This immunodeficient mouse also develops spontaneous hyperglycemia based on the Ins2 ^{Akita} mutation.
Categories:	HUMANE

Genetic Alterations**1) Targeted Mutagenesis**

Type of Allele	Global Null
Targeted Gene	recombination activating gene 1 (Rag1 - NCBI GeneID:19373)
Targeted Allele	Not provided (Rag1 ^{tm1Mom} - MGI:97848)
Description of Targeting Vector	Not provided
Targeting Vector Genbank File	Not provided

Citations

PubMedID	Citation
18785974	Non-obese diabetic-recombination activating gene-1 (NOD-Rag1 null) interleukin (IL)-2 receptor common gamma chain (IL2r gamma null) null mice: a radioresistant model for human lymphohaematopoietic engraftment. (2008) <i>Clin Exp Immunol</i> 154 : 270-84 (Added 2009-04-21 09:46:49)


3) Targeted Mutagenesis

Type of Allele	Global Null
Targeted Gene	interleukin 2 receptor, gamma chain (Il2rg - NCBI GeneID:16186)
Targeted Allele	Not provided (Il2rg ^{tm1Wjl} - MGI:96551)
Description of Targeting Vector	Not provided
Targeting Vector Genbank File	Not provided


Citations

PubMedID	Citation
18785974	Non-obese diabetic-recombination activating gene-1 (NOD-Rag1 null) interleukin (IL)-2 receptor common gamma chain (IL2r gamma null) null mice: a radioresistant model for human lymphohaematopoietic engraftment. (2008) <i>Clin Exp Immunol</i> 154 : 270-84 (Added 2009-04-21 09:46:49)

Strain Information**Access Status**

 This resource is publicly viewable.

Request this Resource

 Request from a repository


Primary contributor: [Shultz Lab](#)

Co-contributed by:

- [Greiner Lab](#)
- [Herrera Lab](#)

Resource Tags

mouse, mouse strain, NOD-Rag1^{null}IL2rg^{null}Ins2^{Akita}

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Resource History & Actions

Approved on Mar 13, 2009
Last modified on Mar 16, 2009

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Related resources**BCBC**

No matching resources

Other Consortia

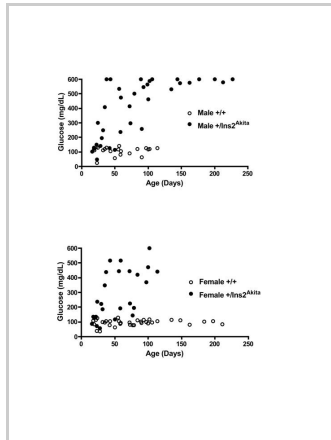
No matching resources

Data courtesy of [dkCOIN](#). Only public resources are displayed.

Strain Type:	Not provided
Chimera/Founder Genetic Background:	Not provided
Current Genetic Background:	Not provided (date recorded: Not provided)
Strain Description:	Not provided

Associated Images

Image 1



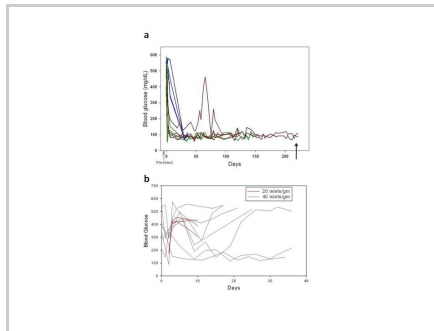
Description:

Spontaneous development of hyperglycemia in NOD-Rag1 null/LL2rg null/Ins2Akita mice. Groups of mice were analysed for the development of hyperglycemia over time and stratified by sex. additionally, littermates of each sex were typed at Ins2 to determine mice that were homozygous wild-type (white circles) or with a single Akita allele (black circles). (hyperglycemia)

Reference:

Not provided

Image 2



Description:

NOD-Rag null/LL2rg null/Ins2Akita mice following human (a) or mouse (b) islet transplantation. Blood glucose levels in individual mice at each human islet dose are shown over the follow-up period. (islet transplantation)

Reference:

Not provided

Repositories

No repositories indicated.

Contact Information

Preferred Contact

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Associated Publications

No publications associated

Comments

There are no comments for this entry.

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