

Resource Summary Report

Generated by [NIF](#) on Aug 24, 2026

NOD.Cg-Cd28^{tm1Mak} *Ighm*^{tm1Cgn} *H2*^{h4}/HbmMmmh

RRID:MMRRC_037353-MU

Type: Organism

Proper Citation

RRID:MMRRC_037353-MU

Organism Information

URL: https://www.mmrrc.org/catalog/sds.php?mmrrc_id=37353

Proper Citation: RRID:MMRRC_037353-MU

Description: Mus musculus with name NOD.Cg-Cd28^{tm1Mak} *Ighm*^{tm1Cgn} *H2*^{h4}/HbmMmmh from MMRRC.

Species: Mus musculus

Notes: Research areas: ; Mutation Type: Targeted Mutation ; Collection: Mullen

Phenotype: decreased bone mineral density [MP:0000063]| abnormal trabecular bone morphology [MP:0000130]| decreased compact bone thickness [MP:0000135]| enlarged heart [MP:0000274]| increased cell proliferation [MP:0000351]| abnormal intestinal epithelium morphology [MP:0000488]| abnormal spleen morphology [MP:0000689]| enlarged lymph nodes [MP:0000702]| abnormal skin condition [MP:0001191]| abnormal cardiovascular system physiology [MP:0001544]| abnormal humoral immune response [MP:0001800]| arrested B cell differentiation [MP:0001802]| decreased IgG level [MP:0001805]| decreased IgM level [MP:0001806]| decreased IgA level [MP:0001807]| thymus hypoplasia [MP:0001823]| abnormal antigen presentation [MP:0001835]| abnormal inflammatory response [MP:0001845]| increased inflammatory response [MP:0001846]| heart inflammation [MP:0001853]| myocarditis [MP:0001856]| kidney inflammation [MP:0001859]| abnormal lymphatic vessel morphology [MP:0001879]| premature death [MP:0002083]| abnormal respiratory system physiology [MP:0002133]| abnormal B cell differentiation [MP:0002144]| abnormal spleen marginal sinus morphology [MP:0002363]| abnormal B lymphocyte antigen presentation [MP:0002453]| decreased immunoglobulin level [MP:0002460]| abnormal immunoglobulin level [MP:0002490]| decreased IgE level [MP:0002492]| tubular nephritis [MP:0002704]| increased urine protein level [MP:0002962]| abnormal cytokine secretion [MP:0003009]| cardiac fibrosis [MP:0003141]| thrombocytopenia [MP:0003179]| small intestinal inflammation [MP:0003306]| increased susceptibility to induced arthritis [MP:0003724]| increased autoantibody level [MP:0003725]| abnormal compact bone morphology [MP:0003797]| abnormal PR interval

[MP:0003901]] insulinitis [MP:0004031]] decreased susceptibility to systemic lupus erythematosus [MP:0004802]] increased susceptibility to autoimmune diabetes [MP:0004803]] decreased susceptibility to autoimmune diabetes [MP:0004804]] decreased spleen weight [MP:0004953]] increased osteoclast cell number [MP:0004984]] increased T cell number [MP:0005015]] decreased B cell number [MP:0005017]] abnormal response to infection [MP:0005025]] increased susceptibility to parasitic infection [MP:0005027]] abnormal T cell proliferation [MP:0005094]] decreased T cell proliferation [MP:0005095]] cachexia [MP:0005150]] decreased susceptibility to injury [MP:0005166]] abnormal pancreatic islet morphology [MP:0005215]] abnormal CD4-positive [MP:0005463]] alpha-beta T cell physiology [MP:0005559]] increased circulating glucose level [MP:0005616]] decreased susceptibility to type IV hypersensitivity reaction [MP:0006387]] abnormal T cell number [MP:0008071]] absent B cells [MP:0008075]] decreased CD4-positive [MP:0008079]] alpha beta T cell number [MP:0008127]] decreased CD8-positive [MP:0008171]] alpha-beta T cell number [MP:0008201]] decreased dendritic cell number [MP:0008211]] abnormal mature B cell morphology [MP:0008212]] absent follicular dendritic cells [MP:0008213]] decreased mature B cell number [MP:0008240]] absent mature B cells [MP:0008241]] absent immature B cells [MP:0008401]] abnormal spleen marginal zone macrophage morphology [MP:0008470]] abnormal metallophilic macrophage morphology [MP:0008495]] abnormal CD8 positive [MP:0009346]] alpha-beta intraepithelial T cell morphology [MP:0010965]] abnormal spleen B cell follicle morphology [MP:0012431]] abnormal cytokine secretion [MP:0003009]] thyroid inflammation [MP:0003504]] insulinitis [MP:0004031]] decreased susceptibility to autoimmune diabetes [MP:0004804]] periinsulinitis [MP:0005580]] decreased physiological sensitivity to xenobiotic [MP:0008874]] abnormal esophageal epithelium morphology [MP:0000468]] enlarged thymus [MP:0000709]] increased activated T cell number [MP:0001829]] brain inflammation [MP:0001847]] increased T cell derived lymphoma incidence [MP:0002024]] abnormal T cell differentiation [MP:0002145]] abnormal lymphopoiesis [MP:0002401]] decreased immunoglobulin level [MP:0002460]] abnormal cytokine secretion [MP:0003009]] esophageal inflammation [MP:0003278]] insulinitis [MP:0004031]] increased length of allograft survival [MP:0004751]] decreased susceptibility to experimental autoimmune encephalomyelitis [MP:0004800]] increased susceptibility to autoimmune diabetes [MP:0004803]] abnormal class switch recombination [MP:0004816]] abnormal regulatory T cell physiology [MP:0004946]] decreased regulatory T cell number [MP:0004974]] abnormal T cell clonal deletion [MP:0005002]] increased eosinophil cell number [MP:0005011]] increased susceptibility to parasitic infection [MP:0005027]] abnormal cytotoxic T cell physiology [MP:0005078]] decreased cytotoxic T cell cytotoxicity [MP:0005079]] decreased T cell proliferation [MP:0005095]] increased T cell proliferation [MP:0005348]] abnormal CD4-positive [MP:0005463]] alpha-beta T cell physiology [MP:0005465]] abnormal T-helper 1 physiology [MP:0005466]] abnormal T-helper 2 physiology [MP:0005596]] increased susceptibility to type I hypersensitivity reaction [MP:0005671]] abnormal response to transplant [MP:0006413]] increased T cell apoptosis [MP:0008049]] increased memory T cell number [MP:0008074]] increased CD4-positive [MP:0008078]] alpha beta T cell number [MP:0008192]] increased CD8-positive [MP:0008482]] alpha-beta T cell number [MP:0008495]] abnormal germinal center B cell physiology [MP:0008496]] decreased spleen germinal center number [MP:0008497]] decreased IgG1 level [MP:0008500]] decreased IgG2a level [MP:0008566]] decreased IgG2b level [MP:0008567]] increased IgG2a level [MP:0008578]] increased interferon-gamma secretion [MP:0008603]] decreased interferon-gamma secretion [MP:0008687]] decreased circulating interferon-gamma level [MP:0008688]] decreased circulating interleukin-4 level [MP:0008699]] increased interleukin-2 secretion [MP:0008700]]

decreased interleukin-2 secretion [MP:0008747]| increased interleukin-4 secretion [MP:0009335]| decreased interleukin-4 secretion [MP:0010268]| abnormal T cell anergy [MP:0010766]

Affected Gene: Cd28||Ighm|||

Catalog Number: 037353-MU

Background: Targeted Mutation

Database: Mutant Mouse Resource and Research Center (MMRRC)

Database Abbreviation: MMRRC

Alternate IDs: MMRRC_37353-MU, MMRRC_037353, MMRRC_37353

Organism Name: NOD.Cg-Cd28^{tm1Mak} Ighm^{tm1Cgn} H2^{h4}/HbmMmmh

Record Creation Time: 20230308T055150+0000

Record Last Update: 20260815T124854+0000

Ratings and Alerts

No rating or validation information has been found for NOD.Cg-Cd28^{tm1Mak} Ighm^{tm1Cgn} H2^{h4}/HbmMmmh.

Warning: Warning. Researchers have noted that this genotype does not sufficiently model human rheumatoid arthritis.

Warning: Warning. Researchers have noted that this genotype does not sufficiently model human type 1 diabetes mellitus.

Data and Source Information

Source: [Integrated Animals](#)

Source Database: Mutant Mouse Resource and Research Center (MMRRC)

Usage and Citation Metrics

We have not found any literature mentions for this resource.