

# Resource Summary Report

Generated by [FDI Lab - SciCrunch.org](https://www.fdi-lab.org) on Mar 31, 2025

## BALB/c-II4ra<sup>tm1Sz/J</sup>

RRID:IMSR\_JAX:003514

Type: Organism

### Proper Citation

RRID:IMSR\_JAX:003514

### Organism Information

**URL:** <https://www.jax.org/strain/003514>

**Proper Citation:** RRID:IMSR\_JAX:003514

**Description:** Mus musculus with name BALB/c-II4ra<sup>tm1Sz/J</sup> from IMSR.

**Species:** Mus musculus

**Notes:** gene symbol note: interleukin 4 receptor; alpha; mutant strain: II4ra

**Affected Gene:** interleukin 4 receptor; alpha

**Genomic Alteration:** targeted mutation 1; Leonard Shultz

**Catalog Number:** JAX:003514

**Database:** International Mouse Resource Center IMSR, JAX

**Database Abbreviation:** IMSR

**Availability:** live

**Alternate IDs:** IMSR\_JAX:3514

**Organism Name:** BALB/c-II4ra<sup>tm1Sz/J</sup>

**Record Creation Time:** 20230509T193241+0000

**Record Last Update:** 20240104T174758+0000

### Ratings and Alerts

No rating or validation information has been found for BALB/c-Il4ra<sup>tm1Sz/J</sup>.

No alerts have been found for BALB/c-Il4ra<sup>tm1Sz/J</sup>.

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## Data and Source Information

**Source:** [Integrated Animals](#)

**Source Database:** International Mouse Resource Center IMSR, JAX

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## Usage and Citation Metrics

We found 23 mentions in open access literature.

**Listed below are recent publications.** The full list is available at [FDI Lab - SciCrunch.org](#).

Zhou Z, et al. (2024) Type 2 cytokine signaling in macrophages protects from cellular senescence and organismal aging. *Immunity*, 57(3), 513.

Florsheim EB, et al. (2023) Immune sensing of food allergens promotes aversive behaviour. *bioRxiv : the preprint server for biology*.

Nakatsuji T, et al. (2023) Competition between skin antimicrobial peptides and commensal bacteria in type 2 inflammation enables survival of *S. aureus*. *Cell reports*, 42(5), 112494.

Hanuscheck N, et al. (2022) Interleukin-4 receptor signaling modulates neuronal network activity. *The Journal of experimental medicine*, 219(6).

Chen F, et al. (2022) Helminth resistance is mediated by differential activation of recruited monocyte-derived alveolar macrophages and arginine depletion. *Cell reports*, 38(2), 110215.

Yang X, et al. (2022) Very-low-density lipoprotein receptor-enhanced lipid metabolism in pancreatic stellate cells promotes pancreatic fibrosis. *Immunity*, 55(7), 1185.

Kurkjian C, et al. (2021) Bias of the Immune Response to *Pneumocystis murina* Does Not Alter the Ability of Neonatal Mice to Clear the Infection. *Journal of fungi (Basel, Switzerland)*, 7(10).

Duan L, et al. (2021) Follicular dendritic cells restrict interleukin-4 availability in germinal centers and foster memory B cell generation. *Immunity*, 54(10), 2256.

Crouse B, et al. (2020) Mechanisms of interleukin 4 mediated increase in efficacy of vaccines against opioid use disorders. *NPJ vaccines*, 5, 99.

Baba T, et al. (2020) Role of IL-4 in bone marrow driven dysregulated angiogenesis and age-related macular degeneration. *eLife*, 9.

Apaydin DC, et al. (2020) Early-Life Stress Regulates Cardiac Development through an IL-4-Glucocorticoid Signaling Balance. *Cell reports*, 33(7), 108404.

Engler AE, et al. (2020) Airway-Associated Macrophages in Homeostasis and Repair. *Cell reports*, 33(13), 108553.

Yu S, et al. (2020) Paneth Cell-Derived Lysozyme Defines the Composition of Mucolytic Microbiota and the Inflammatory Tone of the Intestine. *Immunity*, 53(2), 398.

Frohberger SJ, et al. (2019) Susceptibility to *L. sigmodontis* infection is highest in animals lacking IL-4R/IL-5 compared to single knockouts of IL-4R, IL-5 or eosinophils. *Parasites & vectors*, 12(1), 248.

Massie A, et al. (2018) Mice Lacking Alternatively Activated (M2) Macrophages Show Impairments in Restorative Sleep after Sleep Loss and in Cold Environment. *Scientific reports*, 8(1), 8625.

Tomlinson JE, et al. (2018) Temporal changes in macrophage phenotype after peripheral nerve injury. *Journal of neuroinflammation*, 15(1), 185.

Chen F, et al. (2018) B Cells Produce the Tissue-Protective Protein RELM $\beta$  during Helminth Infection, which Inhibits IL-17 Expression and Limits Emphysema. *Cell reports*, 25(10), 2775.

Lechner AJ, et al. (2017) Recruited Monocytes and Type 2 Immunity Promote Lung Regeneration following Pneumonectomy. *Cell stem cell*, 21(1), 120.

Potter CS, et al. (2014) Chronic proliferative dermatitis in Sharpin null mice: development of an autoinflammatory disease in the absence of B and T lymphocytes and IL4/IL13 signaling. *PloS one*, 9(1), e85666.

Burton OT, et al. (2013) Direct effects of IL-4 on mast cells drive their intestinal expansion and increase susceptibility to anaphylaxis in a murine model of food allergy. *Mucosal immunology*, 6(4), 740.