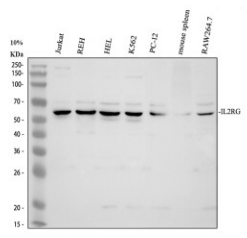
IL2RG Antibody / Common Gamma Chain Polyclonal Antibody (RQ5821)

Catalog No.	Formulation	Size
RQ5821	0.5mg/ml if reconstituted with 0.2ml sterile DI water	100 ug

Bulk quote request

Availability	1-3 business days
Species Reactivity	Human, Mouse, Rat
Format	Antigen affinity purified
Host	Rabbit
Clonality	Polyclonal (rabbit origin)
Isotype	Rabbit IgG
Purity	Affinity purified
Buffer	Lyophilized from 1X PBS with 2% Trehalose
UniProt	P31785
Applications	Western blot: 0.5-1ug/ml
Limitations	This IL2RG Antibody / Common Gamma Chain Polyclonal Antibody is available for research use only.



IL2RG Antibody by WB in Human Cell Lines and Rodent Samples. Western blot testing of human Jurkat (lane 1), REH (lane 2), HEL (lane 3), K562 (lane 4), rat PC-12 (lane 5), mouse spleen (lane 6) and mouse RAW264.7 (lane 7) lysates with IL2RG Antibody. The Common Gamma Chain Polyclonal Antibody detects prominent bands at approximately 55-60 kDa in the human cell lines, with weaker target-region signals in the rodent samples. The migration above the calculated protein mass is consistent with glycosylation of the IL2RG/CD132 cell-surface glycoprotein.

Description

IL2RG Antibody recognizes interleukin 2 receptor gamma (IL2RG), a type I transmembrane protein also known as CD132 and the common gamma chain. IL2RG is a shared receptor component used by several cytokines that regulate immune cell development, survival, proliferation and differentiation. It participates in receptor complexes for IL-2, IL-4, IL-7, IL-9, IL-15 and IL-21, allowing multiple cytokine systems to use common intracellular signaling machinery while retaining specificity through their other receptor subunits.

The common gamma chain does not function as an independent cytokine-binding receptor. Instead, it associates with cytokine-specific receptor components to form functional signaling complexes. Its intracellular domain interacts primarily with Janus kinase 3 (JAK3), while other receptor subunits recruit additional JAK family members. Cytokine-induced receptor assembly activates these kinases and downstream STAT transcription factors, linking extracellular immune signals to changes in gene expression. A Common Gamma Chain Polyclonal Antibody can therefore support research into a central component shared by several JAK/STAT signaling pathways.

IL2RG is particularly important for lymphocyte development and homeostasis. Signaling through the IL-7 receptor contributes to T-cell development, while the IL-15 receptor is essential for normal natural killer cell development and function. Other common gamma chain cytokines regulate lymphocyte proliferation, differentiation, survival and effector responses. Because IL2RG is shared across these receptor systems, disruption of its function affects multiple immune pathways simultaneously rather than eliminating the response to only one cytokine.

Pathogenic variants of IL2RG cause X-linked severe combined immunodeficiency (X-SCID), illustrating the importance of common gamma chain signaling to normal immune development. Defective JAK3 signaling can produce a closely related immunodeficiency phenotype because JAK3 functions immediately downstream of IL2RG-containing receptor complexes. IL2RG is consequently studied in immunodeficiency, hematopoiesis, lymphocyte biology, cytokine signaling and approaches designed to manipulate immune responses therapeutically.

NSJ Bioreagents provides this Common Gamma Chain Polyclonal Antibody for research into IL2RG expression and cytokine receptor biology. Its shared role in six cytokine receptor systems makes IL2RG an important molecular link between diverse extracellular signals and intracellular immune signaling pathways. An IL2RG Antibody can be used to investigate common gamma chain expression, lymphocyte development, JAK/STAT signaling and mechanisms underlying immune dysfunction.

For an antibody with additional WB, IF and flow cytometry validation, see our IL2 Receptor Gamma Antibody.

Application Notes

Optimal dilution of the IL2RG Antibody / Common Gamma Chain Polyclonal Antibody should be determined by the researcher.

Immunogen

Amino acids QLQKKEIHLYQTFVVQLQD from the human protein were used as the immunogen for the IL2RG antibody.

Storage

After reconstitution, the IL2RG antibody can be stored for up to one month at 4oC. For long-term, aliquot and store at -20oC. Avoid repeated freezing and thawing.

Alternate Names

CD132 antibody, Common Gamma Chain antibody, Cytokine Receptor Common Gamma Chain antibody, Gamma C antibody, IL2 Receptor Gamma antibody, Interleukin 2 Receptor Gamma antibody

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