

Mouse IL2RG Protein (His & Fc Tag)

Catalog Number: 50087-M03H

General Information

Gene Name Synonym:

CD132; gamma(c); gc; [g]c

Protein Construction:

A DNA sequence encoding the extracellular domain (Met 1-Ala 263) of mouse IL2RG (NP_038591.1) precursor was fused with the C-terminal polyhistidine-tagged Fc region of human IgG1 at the C-terminus.

Source: Mouse

Expression Host: HEK293 Cells

QC Testing

Purity: > 92 % as determined by SDS-PAGE

Endotoxin:

< 1.0 EU per µg of the protein as determined by the LAL method

Predicted N terminal: Trp 23

Molecular Mass:

The recombinant mouse IL2RG/Fc is a disulfide-linked homodimer after removal of the signal peptide. The reduced monomer consists of 489 amino acids and has a predicted molecular mass of 56.3 kDa. In SDS-PAGE under reducing conditions, the apparent molecular mass of rm IL2RG/Fc monomer is approximately 75-85 kDa due to glycosylation.

Formulation:

Lyophilized from sterile PBS, pH 7.4

Normally 5 % - 8 % trehalose, mannitol and 0.01% Tween80 are added as protectants before lyophilization. Specific concentrations are included in the hardcopy of COA. Please contact us for any concerns or special requirements.

Usage Guide

Stability & Storage:

Samples are stable for twelve months from date of receipt at -20°C to -80°C.

Store it under sterile conditions at -20°C to -80°C upon receiving. Recommend to aliquot the protein into smaller quantities for optimal storage.

Avoid repeated freeze-thaw cycles.

Reconstitution:

Detailed reconstitution instructions are sent along with the products.

SDS-PAGE:



Protein Description

The common gamma chain (γc) (or CD132), also known as interleukin-2 receptor subunit gamma or IL2RG, is a member of the type I cytokine receptor family expressed on most lymphocyte (white blood cell) populations, and its gene is found on the X-chromosome of mammals. The common gamma chain (γc) (or IL2RG), is a cytokine receptor subunit that is common to the receptor complexes for at least six different interleukin receptors: IL-2, IL-4, IL-7, IL-9, IL-15, and the interleukin-21 receptor. It is a component of multiple cytokine receptors that are essential for lymphocyte development and function. X-linked severe combined immunodeficiency (X-SCID) is a rare and potentially fatal disease caused by mutations of IL2RG, the gene encoding IL2RG. IL2RG was demonstrated to be a component of the IL-4 receptor based on chemical cross-linking data, the ability of IL2RG to augment IL-4 binding affinity. The observation that IL-2R gamma is a functional component of the IL-4 receptor, together with the finding that IL-2R gamma associates with the IL-7 receptor, begins to elucidate why a deficiency of this common gamma chain (gamma c) has a profound effect on lymphoid function and development, as seen in X-linked severe combined immunodeficiency.

References

1. Russell SM, *et al.* (1993) Interleukin-2 receptor gamma chain: a functional component of the interleukin-4 receptor. *Science*. 262 (5141): 1880-3.
2. Miyazaki T, *et al.* (1994) Functional activation of Jak1 and Jak3 by selective association with IL-2 receptor subunits. *Science*. 266 (5187): 1045-7.
3. Takeshita T, *et al.* (1992) Cloning of the gamma chain of the human IL-2 receptor. *Science*. 257 (5068): 379-82.

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