

Human IL12A / NKSF1 Protein (Fc Tag)



Sino Biological
Biological Solution Specialist

Catalog Number: 10021-H02H

General Information

Gene Name Synonym:

CLMF; IL-12A; NFSK; NKSF1; P35

Protein Construction:

A DNA sequence encoding the p35 subunit of human IL12, termed as IL12A (P29459) (Met 1-Ser 219) was fused with the Fc region of human IgG1 at the C-terminus.

Source: Human

Expression Host: HEK293 Cells

QC Testing

Purity: > 95 % as determined by SDS-PAGE

Endotoxin:

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

Stability:

Samples are stable for up to twelve months from date of receipt at -70 °C

Predicted N terminal: Arg 23

Molecular Mass:

The recombinant human IL12A/Fc is a disulfide-linked homodimer. The reduced monomer consists of 435 amino acids and has a predicted molecular mass of 49.3 kDa. As a result of glycosylation, the rhIL12A/Fc monomer migrates as an approximately 65-70 kDa band in SDS-PAGE under reducing conditions.

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

Storage:

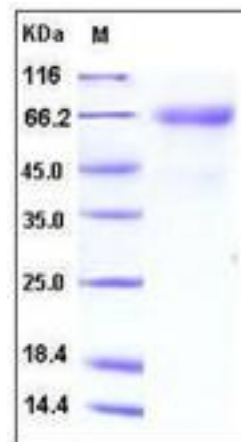
Store it under sterile conditions at -20°C to -80°C upon receiving. Recommend to aliquot the protein into smaller quantities for optimal storage.

Avoid repeated freeze-thaw cycles.

Reconstitution:

Detailed reconstitution instructions are sent along with the products.

SDS-PAGE:



Protein Description

Interleukin-12 subunit alpha (IL12A/IL-12p35) is also known as Cytotoxic lymphocyte maturation factor 35 kDa subunit, cytotoxic lymphocyte maturation factor 1, p35, NK cell stimulatory factor chain 1, and interleukin-12 alpha chain. IL12A/IL-12p35 is a subunit of a cytokine that acts on T and natural killer cells, and has a broad array of biological activities. The cytokine is a disulfide-linked heterodimer composed of the 35-kD subunit encoded by this gene, and a 40-kD subunit that is a member of the cytokine receptor family. IL12A/IL-12p35 is required for the T-cell-independent induction of IFN-gamma, and is important for the differentiation of both Th1 and Th2 cells. The responses of lymphocytes to this cytokine are mediated by the activator of transcription protein STAT4. Nitric oxide synthase 2A (NOS2A/NOS2) is found to be required for the signaling process of this cytokine in innate immunity. In clinical, IL-12 remains a very promising immunotherapeutic agent because recent cancer vaccination studies in animal models and humans have demonstrated its powerful adjuvant properties. The immune modulating characteristics of IL-12 considered responsible for the adjuvant effects, as well as the results of animal and human cancer vaccination studies with IL-12 applied as an adjuvant. IL12A/IL-12p35 indicates a cytokine which is important in the development of prostate cancer.

References

1. Sattler HP, *et al.* (2000) Novel amplification unit at chromosome 3q25-q27 in human prostate cancer. *Prostate*. 45(3): 207-15.
2. Lamont AG, *et al.* (1996) IL-12: a key cytokine in immune regulation. *Immunol Today*. 17(5): 214-7.
3. Portielje JE, *et al.* (2003) IL-12: a promising adjuvant for cancer vaccination. *Cancer Immunol Immunother*. 52(3): 133-44.

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