

Synonym

IL12A,CLMF,IL-12A,NFSK,NKSF1,P35

Source

Human IL-12A, Fc Tag (NK1-H5252) is expressed from human 293 cells (HEK293). It contains AA Arg 23 - Ser 219 (Accession # P29459).

Predicted N-terminus: Arg 23

Molecular Characterization

IL-12A(Arg 23 - Ser 219) P29459	Fc(Pro 100 - Lys 330) P01857
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This protein carries a human IgG1 Fc tag at the C-terminus.

The protein has a calculated MW of 49.2 kDa. The protein migrates as 57-66 kDa under reducing (R) condition (SDS-PAGE) due to glycosylation.

Endotoxin

Less than 1.0 EU per µg by the LAL method.

Purity

>90% as determined by SDS-PAGE.

Formulation

Lyophilized from 0.22 µm filtered solution in Tris with Glycine, Arginine and NaCl, pH7.5. Normally trehalose is added as protectant before lyophilization.

Contact us for customized product form or formulation.

Reconstitution

Please see Certificate of Analysis for specific instructions.

For best performance, we strongly recommend you to follow the reconstitution protocol provided in the CoA.

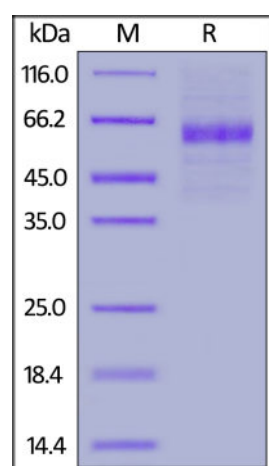
Storage

For long term storage, the product should be stored at lyophilized state at -20°C or lower.

Please avoid repeated freeze-thaw cycles.

This product is stable after storage at:

- -20°C to -70°C for 12 months in lyophilized state;
- -70°C for 3 months under sterile conditions after reconstitution.

SDS-PAGE

Human IL-12A, Fc Tag on SDS-PAGE under reducing (R) condition. The gel was stained overnight with Coomassie Blue. The purity of the protein is greater than 90%.

Background

Interleukin-12 (IL12) is also known as natural killer cell stimulatory factor (NKSF), cytotoxic lymphocyte maturation factor (CLMF), is a heterodimeric cytokine encoded by two separate genes, IL-12A (p35) and IL-12B (p40). IL12 is naturally produced by dendritic cells, macrophages and human B-lymphoblastoid cells (NC-37) in response to antigenic stimulation. IL-12 is involved in the differentiation of naive T cells into Th0 cells and plays an important role in the activities of natural killer cells and T lymphocytes. IL-12 also has anti-angiogenic activity, which means it can block the formation of new blood vessels. Interleukin-12 subunit alpha (IL12A) also known as NKSF1, CLMF1 and P35, IL12A shows significant sequence similarity to IL-6, G-CSF, and exerts biological activities only when the IL12B

is co-expressed. IL12B deficient mice are resistant to the induction of experimental chronic inflammatory diseases whereas IL12A knock-out mice develop more severe forms, suggesting opposite functions of the two subunits in the outcome of chronic inflammatory diseases.

References

- (1) [Kaliński P, et al., 1997, J. Immunol. 159 \(1\): 28–35.](#)
- (2) [Chehimi J, et al., 1993, Eur J Immunol., 23\(8\):1826-30.](#)
- (3) [Thierfelder WE, et al., Nature., 382\(6587\):171-4.](#)

Please contact us via TechSupport@acrobiosystems.com if you have any question on this product.