


Human IL-12 (IL-12A & IL-12B) protein, His Tag

Cat #: PRP100705

Size: 50µg/500µg

Product Information

	Product Name: Human IL-12 (IL-12A & IL-12B) protein, His Tag		
REF	Catalog Number: PRP100705	LOT	Lot Number: Refer to product label
	Purity: > 95 % as determined by SDS-PAGE		
	Storage: Store at -20°C		Preparation method: Human Cells
	Shipping: The product is shipped at ambient temperature.		

Background: IL-12 is composed of a bundle of four alpha helices. It is a heterodimeric cytokine encoded by two separate genes, IL-12A (p35) and IL-12B (p40). The active heterodimer (referred to as 'p70'), and a homodimer of p40 are formed following protein synthesis. IL-12 is involved in the differentiation of naive T cells into Th1 cells. It is known as a T cell-stimulating factor, which can stimulate the growth and function of T cells. It stimulates the production of interferon-gamma (IFN-γ) and tumor necrosis factor-alpha (TNF-α) from T cells and natural killer (NK) cells, and reduces IL-4 mediated suppression of IFN-γ. T cells that produce IL-12 have a coreceptor, CD30, which is associated with IL-12 activity. IL-12 plays an important role in the activities of natural killer cells and T lymphocytes. IL-12 mediates enhancement of the cytotoxic activity of NK cells and CD8+ cytotoxic T lymphocytes. There also seems to be a link between IL-2 and the signal transduction of IL-12 in NK cells. IL-2 stimulates the expression of two IL-12 receptors, IL-12R-β1 and IL-12R-β2, maintaining the expression of a critical protein involved in IL-12 signaling in NK cells. Enhanced functional response is demonstrated by IFN-γ production and killing of target cells.

Sequence: Amino acid sequence derived from p35 subunit of human IL-12, termed as IL12A (NP_000873.2) (Met 1-Ser 219) was fused with a polyhistidine tag at the C-terminus, constructed the plasmid 1 ; Amino acid sequence derived from p40 subunit of human IL-12, termed

Protein length: The recombinant IL12 heterodimer of human IL12A/IL12B comprises 525 (208 + 317) amino acids and has a calculated molecular mass of 60.2 (24 + 36.2) kDa. The apparent molecular mass of rh IL12 heterodimer is approximately 40 & 43 kDa respectively in SDS-PAGE under reducing conditions.

Formulation: Lyophilized from sterile PBS, pH 7.4.

Storage Instructions: Lyophilized Human IL-12 (IL12A & IL12B Heterodimer) protein, His Tag product should be stored desiccated below -18°C. Upon reconstitution, the protein should be stored at 4°C between 2-7 days and for future use below

-18°C. For long term storage it is recommended to add a carrier protein (0.1% HSA or BSA). Please prevent freeze-thaw cycles.

Usage notes: Always centrifuge tubes before opening. It is recommended to reconstitute the lyophilized Human IL-12 (IL12A & IL12B Heterodimer) protein, His Tag in sterile ddH₂O not less than 100µg/ml, which can then be further diluted to other aqueous solutions.

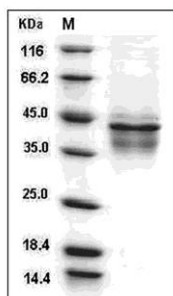


Fig. SDS-PAGE analysis of Human IL-12 (IL-12A & IL-12B) protein, His Tag.

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