Datasheet for ABIN7566188

IL12 Protein (AA 23-215, AA 23-335) (Fc Tag)

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Overview

Quantity:	50 µg
Target:	IL12
Protein Characteristics:	AA 23-215, AA 23-335
Origin:	Mouse
Source:	CHO Cells
Protein Type:	Recombinant
Purification tag / Conjugate:	This IL12 protein is labelled with Fc Tag.

Product Details

Purpose:	IL-12 (mouse):Fc-KIH (human) (rec.)
Cross-Reactivity:	Mouse
Characteristics:	IL-12A/p35 (aa 23-215) (mouse):Fc Knobs and IL-12B/p40 (aa 23-335) (mouse):Fc Holes form the IL-12 (mouse):Fc-KIH (human) using the Knobs-into-Holes technology (see reference: J.B. Ridgway, et al., Protein Eng. 9, 617 (1996)).
Purity:	>95 % (SDS-PAGE)
Endotoxin Level:	<0.01EU/µg purified protein (LAL test).

Target Details

Target:	IL12
Alternative Name:	IL-12 (IL12 Products)

Target Details

Background:	IL-12 (mouse):Fc Knobs-into-Holes (human) (rec.), Interleukin-12 Subunit alpha:Interleukin-12 Subunit beta, CLMF 35 kDa Subunit:CLMF 40 kDa Subunit, IL-12 Subunit p35:IL-12 Subunit Interleukin-12 (IL-12) family members are heterodimer glycoproteins, composed of two covalently linked subunits, alpha and beta chains. The alpha-subunit consists of IL-23p19, IL-27p28 and IL-12p35, and the beta-subunit includes IL-12p40 and Epstein-Barr virus-induced gene (Ebi3). IL-12 members bind to cognate heterodimeric receptor chains expressed on T cells. This family includes IL-12, IL-23, IL-27, IL-35 and IL-39. IL-12 and IL-23 are predominantly proinflammatory cytokines that contribute key roles in the development of Th1 and Th17 cells, respectively. IL-27 has both pro- and anti-inflammatory properties and is a potent T cell immunomodulator. IL-35, a new member of this family, is a potent inhibitory cytokine produced by natural, thymus-derived regulatory T cell (nTreg) populations. IL-39, the newest member of IL-12 family, mediates the inflammatory response through the activation of STAT1/STAT3 signaling pathway. These IL-12 family members link innate immunity with the development of adaptive immunity and are also important for regulating T cell responses. IL-12 is composed of two subunits IL-12A/p35 and IL-12B/p40 and signals via a high-affinity IL-12R, leading to activation of STAT 4. IL-12 is produced by macrophages, dendritic cells and B cells. The key role of the pro-inflammatory IL-12 is to induce the IFN-gamma which regulates the Th responses, to promote the naive T cells to directly differentiate into effector cells (Th1) and then release IFN-gamma. The protein IL-12 (mouse):Fc-KIH (human) (rec.) is produced by using two different vectors, one encoding for the IL-12A/p35:Fc Knobs sequence (synthesizing a protein of 60 kDa) and one encoding for the IL12B/p40:Fc Holes sequence (synthesizing a protein of 75 kDa). Both vectors transfected into CHO cells produce both Fc molecules (Knobs-into-Holes technology, J.B. Ridgway, et al., Protein Eng. 9, 617 (1996)) required for dimerization and for secretion of the final protein IL-12 (mouse):Fc-KIH (human) (rec.). InVivoKines™ are a new generation of recombinant fusion proteins for immunotherapeutic, preclinical and translational in vivo research
Molecular Weight:	~60kDa and 75 kDa (SDS-PAGE)
UniProt:	P43431, P43432
Pathways:	JAK-STAT Signaling, TLR Signaling, Cellular Response to Molecule of Bacterial Origin, Regulation of Leukocyte Mediated Immunity, Positive Regulation of Immune Effector Process, Activated T Cell Proliferation, Cancer Immune Checkpoints, Inflammasome

Application Details

Restrictions:	For Research Use only

Handling

Format:	Lyophilized
Reconstitution:	1 mg/mL after reconstitution.
Concentration:	1 mg/mL
Buffer:	Contains PBS
Handling Advice:	After reconstitution, prepare aliquots and store at -20 °C. Avoid freeze/thaw cycles. Centrifuge lyophilized vial before opening and reconstitution. PBS containing at least 0. 1 % BSA should be used for further dilutions.
Storage:	4 °C,-20 °C
Storage Comment:	Short Term Storage: +4°C Long Term Storage: -20°C Use & Stability: Stable for at least 6 months after receipt when stored at -20°C.Working aliquots are stable for up to 3 months when stored at -20°C.