

Datasheet for ABIN7566271

IL-37 Protein (AA 46-218, Monomer) (Fc Tag)



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Overview

Quantity:	3 x 10 µg
Target:	IL-37 (IL37)
Protein Characteristics:	AA 46-218, Monomer
Origin:	Human
Source:	HEK-293 Cells
Protein Type:	Recombinant
Purification tag / Conjugate:	This IL-37 protein is labelled with Fc Tag.

Product Details

Purpose:	IL-37 (human) (monomeric):Fc-KIH (human) (rec.)
Cross-Reactivity:	Human, Mouse
Characteristics:	Human IL-37 (aa 46-218) (Delta5CysS-S and Y85A) (see reference: A. Bujotzek, et al. 2022) is fused at the C-terminus to a Fc (human) IgG1 (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:	IL-37 (IL37)
Alternative Name:	IL-37 (IL37 Products)

Target Details

Background:	<p>IL-37 (human) (monomeric):Fc Knobs-into-Holes (human) (rec.), Interleukin-1 Family Member 7, IL-1F7, FIL1 zeta, IL-1X, Interleukin-1 Homolog 4, IL-1H4, Interleukin-1 zeta, IL-1 zeta, IL-1RP1, IL1F7, FIL1Z, IL1H4, IL1RP1</p> <p>IL-37 (IL-1F7, IL-1H4) is an IL-1 family member that is expressed only in certain types of human organs and cells such as heart, thymus, testis, kidney, mononuclear cells (PBMcs) and dendritic cells. IL-37 is a soluble and secreted cytokine of 218 residues that shares the beta-trefoil fold common to IL-1 family cytokines. But IL-37 is an atypical member of the IL-1 family of cytokines as it functions to inhibit many of the major pathways of innate and adaptive immunity and inflammation. It binds to the interleukin-18 receptor (IL-18R) and its co-receptor SIGIRR. IL-37 is secreted as a full-length and as a processed form starting from amino acid Val46 and assembles into an activity-limiting dimer with a dimerization constant in the nanomolar range. IL-37 mutations that lock the cytokine into its monomeric conformation (e.g. Y85A and D73K) are more active at blocking inflammation than wild-type dimer-forming IL-37 in a broad range of in vitro and in vivo activity assays. IL-37 also inhibited Lipopolysaccharide (LPS)-induced immunological reaction and LPS-induced osteoclast formation and bone resorption. IL-37 (human) (monomeric):Fc-KIH (human) (rec.) (Prod. No. AG-40B-0221) is a new recombinant monomeric IL-37 produced in mammalian cells that has enhanced stability and activity compared to the classical human recombinant IL-37 produced in bacteria. This monomeric IL-37 protein is produced by using two different vectors, one encoding for the IL-37 (monomeric):Fc Knobs sequence (synthesizing a protein of 50 kDa) and one encoding for the Fc Holes sequence (synthesizing a protein of 28 kDa). Both vectors transfected into HEK293 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-37 (human) (monomeric):Fc-KIH (human) (rec.). InVivoKines™ are a new generation of recombinant fusion proteins for immunotherapeutic, preclinical and translational in vivo research</p>
Molecular Weight:	~55kDa and 28kDa (SDS-PAGE), ~90 kDa (Monomer) (SEC)
NCBI Accession:	NP_055254

Application Details

Restrictions:	For Research Use only
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Handling

Format:	Lyophilized
Reconstitution:	After reconstitution: for 10 µg size: 0.1 mg/mL, for 100 µg size: 1 mg/mL

Handling

Concentration:	Lot specific
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 1 year after receipt when stored at -20°C. Working aliquots are stable for up to 3 months when stored at -20°C.