Datasheet for ABIN7566182

IL-11 Protein (AA 22-199, Monomer) (Fc Tag)

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Overview

Quantity:	50 µg
Target:	IL-11 (IL11)
Protein Characteristics:	AA 22-199, Monomer
Origin:	Human
Source:	HEK-293 Cells
Protein Type:	Recombinant
Purification tag / Conjugate:	This IL-11 protein is labelled with Fc Tag.

Product Details

Purpose:	IL-11 (human) (monomeric):Fc (LALA-PG)-KIH (human) (rec.)
Cross-Reactivity:	Human, Mouse
Characteristics:	Human IL-11 (aa 22-199) is fused at the C-terminus to the Fc portion of human IgG1 (LALA-PG) (Knobs-into-Holes technology) (see reference: J.B. Ridgway, et al., Protein Eng. 9, 617 (1996)).
Purity:	>95 % (SDS-PAGE)
Endotoxin Level:	<0.002 EU/µg protein (LAL test).
Grade:	Animal-Free

Target Details

Target:	IL-11 (IL11)
Alternative Name:	IL-11 (IL11 Products)

Target Details

Background:	InVivoKine™, IL-11 (human) (monomeric):Fc (LALA-PG) Knobs-into-Holes (human) (rec.), Interleukin-11, Adipogenesis Inhibitory Factor, AGIF Interleukin-11 (IL-11) is a 19 kDa monomeric protein. IL-11 forms a hexameric signaling complex, which consists of the cytokine, the cognate receptor (IL-11Ralpha) and the common signaling receptor (GP130) in a 2:2:2 stoichiometry. Interleukin-11 (IL-11) belongs to the IL-6 family of cytokines, which includes IL-6, leukemia inhibitory factor, Oncostatin M, ciliary neurotrophic factor, cardiotrophin-1, cardiotrophin-like cytokine, neuropoietin, IL-27 and IL-31. Interleukin-11 (IL-11) has diverse biological activities: i) it stimulates the proliferation and differentiation of hematopoietic stem cells and progenitor cells, enhances the production of megakaryocytes, leading to increased platelet production (thrombopoiesis), ii) IL-11 activates fibroblasts and exhibits either a pro-inflammatory or pro-fibrotic phenotype. Recently, IL-11 has been shown to be a key factor in 'inflammaging' (chronic inflammation), one of the hallmarks of aging leading to age-related illnesses, including cardiometabolic, neurodegenerative, musculoskeletal dysfunction and cancer. Inhibition of IL-11 has been shown to increase lifespan and health span in mice. IL-11 influences aging by inducing IL-33 in fibroblasts and NLRP3 in macrophages. The protein IL-11 (human) (monomeric):Fc (LALA-PG)-KIH (human) (rec.) is produced by using two different vectors, one encoding for the IL-11 (human):Fc (LALA-PG) Knobs sequence (synthesizing a protein of 50 kDa) and one encoding for the Fc (LALA-PG) 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 of the Fc moieties and for secretion of the final protein IL-11 (human) (monomeric):Fc-KIH (human) (rec.). The LALA-PG mutations inhibit binding to FcgammaRs and C1q while FcRn binding and Fc stability remain unaffected. InVivoKines™ are a new generation of recombinant fusion proteins for immunotherapeutic, preclinical and translational in vivo research
Molecular Weight:	~50kDa and 28kDa (SDS-PAGE)
UniProt:	P20809
Pathways:	JAK-STAT Signaling, Negative Regulation of Hormone Secretion

Application Details

Restrictions:	For Research Use only

Handling

Format:	Lyophilized

Handling

Reconstitution:	After reconstitution: 1 mg/mL
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.