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Product datasheet for DA3546X

Interleukin-4 / IL4 Human Protein

Product data:

Product Type:	Recombinant Proteins
Description:	Interleukin-4 / IL4 human recombinant protein, 50 µg
Species:	Human
Expression Host:	E. coli
Predicted MW:	15 kDa
Purity:	>98% pure by SDS-PAGE and HPLC analyses.
Buffer:	Presentation State: Purified State: Lyophilized purified protein. Buffer System: PBS without stabilizer.
Bioactivity:	Biological: Recombinant Human IL-4 is fully biologically active when compared to standards. The ED50 as determined by the dose-dependent stimulation of Human TF-1 cells is 0.1-0.3 ng/ml. For most in vitro applications, IL-4 exerts its biological activity in the concentration range of 0.1 to 10.0 ng/ml. Specific: 5 x 10^6 units/mg
Endotoxin:	< 0.1 ng per µg (IEU/µg) of IL-4
Reconstitution Method:	The lyophilized IL-4 is soluble in water and most aqueous buffers. Restore in water to a concentration of 100 ng/ml. This solution can be diluted into water or other buffered solutions or stored at -20°C for future use.
Preparation:	Lyophilized purified protein.
Protein Description:	Recombinant Human IL-4 produced in E. coli is a single, non-glycosylated polypeptide chain having a molecular mass of 14.9 kDa and containing 129 amino acid residues.
Note:	Centrifuge vial before opening!
Storage:	Store lyophilized at 2-8°C for 6 months or at -20°C long term. After reconstitution store the antibody undiluted at 2-8°C for one month or (in aliquots) at -20°C long term. Avoid repeated freezing and thawing.
Stability:	Shelf life: one year from despatch.

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RefSeq:	NP_000580
Locus ID:	3565
UniProt ID:	P05112
Cytogenetics:	5q31.1
Synonyms:	IL-4, BSF1, Lymphocyte stimulatory factor 1, Binetrakin, Pitrakinra
Summary:	The protein encoded by this gene is a pleiotropic cytokine produced by activated T cells. This cytokine is a ligand for interleukin 4 receptor. The interleukin 4 receptor also binds to IL13, which may contribute to many overlapping functions of this cytokine and IL13. STAT6, a signal transducer and activator of transcription, has been shown to play a central role in mediating the immune regulatory signal of this cytokine. This gene, IL3, IL5, IL13, and CSF2 form a cytokine gene cluster on chromosome 5q, with this gene particularly close to IL13. This gene, IL13 and IL5 are found to be regulated coordinately by several long-range regulatory elements in an over 120 kilobase range on the chromosome. IL4 is considered an important cytokine for tissue repair, counterbalancing the effects of proinflammatory type 1 cytokines, however, it also promotes allergic airway inflammation. Moreover, IL-4, a type 2 cytokine, mediates and regulates a variety of human host responses such as allergic, anti-parasitic, wound healing, and acute inflammation. This cytokine has been reported to promote resolution of neutrophil-mediated acute lung injury. In an allergic response, IL-4 has an essential role in the production of allergen-specific immunoglobin (Ig) E. This pro-inflammatory cytokine has been observed to be increased in COVID-19 (Coronavirus disease 2019) patients, but is not necessarily associated with severe COVID-19 pathology. Two alternatively spliced transcript variants of this gene encoding distinct isoforms have been reported. [provided by RefSeq, Aug 2020]
Protein Families:	Druggable Genome, Secreted Protein
Protein Pathways:	Allograft rejection, Asthma, Autoimmune thyroid disease, Cytokine-cytokine receptor interaction, Fc epsilon RI signaling pathway, Hematopoietic cell lineage, Jak-STAT signaling pathway, T cell receptor signaling pathway