

## Product datasheet for DA3546S

### Interleukin-4 / IL4 Human Protein

#### Product data:

<b>Product Type:</b>	Recombinant Proteins
<b>Description:</b>	Interleukin-4 / IL4 human recombinant protein, 2 µg
<b>Species:</b>	Human
<b>Expression Host:</b>	E. coli
<b>Predicted MW:</b>	15 kDa
<b>Purity:</b>	>98% pure by SDS-PAGE and HPLC analyses.
<b>Buffer:</b>	Presentation State: Purified State: Lyophilized purified protein. Buffer System: PBS without stabilizer.
<b>Bioactivity:</b>	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 <sup>6</sup> units/mg
<b>Endotoxin:</b>	< 0.1 ng per µg (IEU/µg) of IL-4
<b>Reconstitution Method:</b>	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.
<b>Preparation:</b>	Lyophilized purified protein.
<b>Protein Description:</b>	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.
<b>Note:</b>	Centrifuge vial before opening!
<b>Storage:</b>	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.
<b>Stability:</b>	Shelf life: one year from despatch.



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<b>RefSeq:</b>	<u>NP_000580</u>
<b>Locus ID:</b>	3565
<b>UniProt ID:</b>	<u>P05112, D4HNR6</u>
<b>Cytogenetics:</b>	5q31.1
<b>Synonyms:</b>	BCGF-1; BCGF1; BSF-1; BSF1; IL-4
<b>Summary:</b>	<p>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 immunoglobulin (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]</p>
<b>Protein Families:</b>	Druggable Genome, Secreted Protein
<b>Protein Pathways:</b>	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