

## Product datasheet for **TP720041M**

### IL4 (NM\_000589) Human Recombinant Protein

#### Product data:

Product Type:	Recombinant Proteins
Description:	Recombinant protein of human interleukin 4 (IL4), transcript variant 1
Species:	Human
Expression Host:	E. coli
Expression cDNA Clone or AA Sequence:	His25-Ser153
Tag:	Tag Free
Predicted MW:	15.1 kDa
Concentration:	lot specific
Purity:	>95% as determined by SDS-PAGE and Coomassie blue staining
Buffer:	Provided lyophilized from a 0.2 µm filtered solution of 20 mM Tris-HCl, 150 mM NaCl
Bioactivity:	ED50 is less than 2 ng/ml as determined by the dose-dependent stimulation of TF-1 cells. Specific Activity of 5.0 x 10 <sup>6</sup> IU/mg.
Endotoxin:	< 0.1 EU per µg protein as determined by LAL test
Reconstitution Method:	Always centrifuge tubes before opening. Do not mix by vortex or pipetting. Dissolve the lyophilized protein in ddH <sub>2</sub> O. It is not recommended to reconstitute a concentration less than 100 µg/ml. Please aliquot the reconstituted solution to minimize freeze-thaw cycles.
Storage:	Store at -80°C.
Stability:	Stable for at least 6 months from date of receipt under proper storage and handling conditions.
RefSeq:	<a href="#">NP_000580</a>
Locus ID:	3565
UniProt ID:	<a href="#">P05112</a> , <a href="#">D4HNR6</a>
Cytogenetics:	5q31.1
Synonyms:	BCGF-1; BCGF1; BSF-1; BSF1; IL-4



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**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 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]

**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

**Product images:**