

Recombinant Human IL4 Protein

For Research Use Only

1. Basic Product Information

Catalog No.: REP50535

Size: 10ug, 100ug

Protein Name: Interleukin-4 (IL-4) (B-cell stimulatory factor 1) (BSF-1) (Binetrakin)
(Lymphocyte stimulatory factor 1) (Pitrakinra)

Synonym: IL4

UniProt ID: P05112

UniProt Link: www.uniprot.org/uniprotkb/P05112/entry

Species Source: Human

Expression System: HEK293T eukaryotic cell expression system Sequence

Length: 153 AA

Molecular Weight: 17 KD

Protein Tag: C-terminal His6

2. Amino Acid Sequence

MGLTSQLLPPLFFLLACAGNFVHGHKCDITLQEIIKTLNSLTEQKTLCTELTVTDIFAASKNTTEKETFC
RAATVLRQFYSHHEKDTRCLGATAQQFHRHKQLIRFLKRLDRNLWGLAGLNSCPVKEANQSTLENF
LERLKTIMREKYSKCSS

3. Buffer Composition

Liquid format: PBS-based buffer containing 50% glycerol. Glycerol concentration can be customized upon customer request; please state special requirements when placing your order.

Lyophilized format: Buffer before lyophilization is PBS supplemented with 6% trehalose.

4. Storage Conditions

Upon receipt, store the product at -20 °C or -80 °C. Aliquot the product for on-demand use to preserve protein activity and prevent denaturation and inactivation caused by repeated freeze-thaw cycles.

5. Product Description

This product is recombinant Interleukin-4 (IL-4) (B-cell stimulatory factor 1) (BSF-1) (Binetrakin) (Lymphocyte stimulatory factor 1) (Pitrakinra) produced using the HEK293T eukaryotic cell expression system. It is suitable for in-vitro functional assays, protein-protein interaction studies, antibody preparation and other biomedical research applications.

Protein Function: Cytokine secreted primarily by mast cells, T-cells, eosinophils, and basophils that plays a role in regulating antibody production, hematopoiesis and inflammation, and the development of effector T-cell responses (PubMed:1993171, PubMed:3016727). Induces the expression of class II MHC molecules on resting B-cells. Enhances both secretion and cell surface expression of IgE and IgG1 (PubMed:1993171). Also regulates the expression of the low affinity Fc receptor for IgE (CD23) on both lymphocytes and monocytes (PubMed:2521231). Positively regulates IL31RA expression in macrophages. Stimulates autophagy in dendritic cells by interfering with mTORC1 signaling and through the induction of RUFY4. In addition, plays a critical role in higher functions of the normal brain, such as memory and learning (By similarity). Upon binding to IL4, IL4R receptor dimerizes either with the common IL2R gamma chain/IL2RG to produce the type 1 signaling complex, located mainly on hematopoietic cells, or with the IL13RA1 to produce the type 2 complex, which is also expressed on nonhematopoietic cells (PubMed:10219247, PubMed:11526337, PubMed:18243101). Engagement of both types of receptors initiates JAK3 and to a lower extent JAK1 phosphorylation leading to activation of the signal transducer and activator of transcription 6/STAT6 (PubMed:7721895).

Subcellular Localization: Secreted.

6. Notes

- Avoid repeated freeze-thaw cycles to maintain protein stability and biological activity.
- Please specify special buffer-composition requirements at the time of order placement.
- For research use only. Not intended for clinical diagnosis, therapeutic use or commercial manufacturing.