

Recombinant Mouse IL4 Protein

For Research Use Only

1. Basic Product Information

Catalog No.: REP51242

Size: 10ug, 100ug

Protein Name: Interleukin-4 (IL-4) (B-cell IgG differentiation factor) (B-cell growth factor 1) (B-cell stimulatory factor 1) (BSF-1) (IGG1 induction factor) (Lymphocyte stimulatory factor 1)

Synonym: Il4, Il-4

UniProt ID: P07750

UniProt Link: www.uniprot.org/uniprotkb/P07750/entry

Species Source: Mouse

Expression System: HEK293T eukaryotic cell expression system Sequence

Length: 140 AA

Molecular Weight: 16 KD

Protein Tag: C-terminal His6

2. Amino Acid Sequence

MGLNPQLVVILLFFLECTRSHIHGCDKNHLREIIGILNEVTGEGTPCTEMDVPNVLTATKNTTESELVC
RASKVLRIFYLKHGKTPCLKKNSSVLMELQRLFRAFRCILDSSISCTMNESKSTSLKDFLESLSIMQM
DYS

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 IgG differentiation factor) (B-cell growth factor 1) (B-cell stimulatory factor 1) (BSF-1) (IGG1 induction factor) (Lymphocyte stimulatory factor 1) 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:3083412). Induces the expression of class II MHC molecules on resting B-cells (PubMed:3498301). Enhances both secretion and cell surface expression of IgE and IgG1 (PubMed:3498301). Also regulates the expression of the low affinity Fc receptor for IgE (CD23) on both lymphocytes and monocytes (By similarity). Positively regulates IL31RA expression in macrophages. Stimulates autophagy in dendritic cells by interfering with mTORC1 signaling and through the induction of RUFY4 (PubMed:26416964). In addition, plays a critical role in higher functions of the normal brain, such as memory and learning (PubMed:25772794, PubMed:28202615). 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. 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:25847241, PubMed:8624821).

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.