Recombinant IL4 protein (His tag)

Catalog Number	544309
Synonyms	IL-4; B-cell stimulatory factor 1; BSF-1; Binetrakin; Lymphocyte stimulatory factor 1; Pitrakinra
Species	Human
Expression System	E. coli
Accession	P05112
Molecular Weight	Predictes a molecular mass of 16.62 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 17 kDa band.

Product Information

Sequence Region	25-153
Form	Lyophilized powder
Formulation	Lyophilized from sterile PBS, pH 7.4
Purity	>89%, by SDS-PAGE with Coomassie Brilliant Blue staining.
Endotoxin	Not tested.
Activity	Not tested.
Stability	Samples are stable for up to twelve months from date of receipt at -70℃
Protein Construction	DNA encoding 25-153 aa (P05112) were fused with 6His tag.

Storage & Handling

Reconstitution	Reconstitute at 0.25 μg/μl in sterile water for short-term storage. Reconstitution with 50% glycerol solution is recommended for longer term storage (see Stability and Storage for more details). If a different concentration is needed for your purposes please adjust the reconstitution volume as required (please note: the ion concentration of the final solution will vary according to the volume used). Note: Centrifuge vial before opening. When reconstituting, gently pipet and wash down the sides of the vial to ensure full recovery of the protein into solution.
Storage	Store it under sterile conditions at -20℃ to -80℃. It is recommended that the protein be aliquoted for optimal storage. Avoid repeated freeze-thaw cycles.
Shipping	In general, recombinant proteins are provided as lyophilized powder which are shipped at ambient temperature. Bulk packages of recombinant proteins are provided as frozen liquid. They are shipped out with blue ice unless customers require otherwise.

Description

Description	Recombinant Human Interleukin-4 (IL-4) Fragment (aa 25-153) is a high-purity, stable protein fragment designed for structural and functional studies. This 129-amino acid fragment retains key functional regions, offering researchers a reliable tool for investigating cytokine signaling, immune regulation, and therapeutic development. Interleukin-4 (IL-4) is a pleiotropic cytokine secreted by mast cells, T-cells, eosinophils, and basophils that plays critical roles in immune regulation. It functions in antibody production regulation, hematopoiesis, inflammation control, and effector T-cell response development. IL-4 induces class II MHC molecule expression on B-cells, enhances IgE and IgG1 secretion and surface expression, and regulates CD23 (Fc receptor for IgE) expression on lymphocytes and monocytes. The cytokine also stimulates autophagy in dendritic cells and contributes to higher brain functions such as memory and learning. IL-4 signals through two receptor complexes: type 1 (with IL2RG) primarily on hematopoietic cells and type 2 (with IL13RA1) on both hematopoietic and nonhematopoietic cells, initiating JAK/STAT6 signaling pathways. As a secreted protein, IL-4 functions extracellularly in various physiological and immunological processes.