IL-13 Mouse Active Protein

PRODUCT OVERVIEW

Product Name	IL-13, Active Protein
Full Product Name	Recombinant Mouse IL-13 Protein (Pro22-Phe131)
Product Gene Name	IL-13 active protein
Product Synonym Names	Interleukin-13; IL-13; T-Cell Activation Protein P600; Il13; Il-13
Sequence	Pro22-Phe1 31
Host	E Coli
Form/Format	Lyophilized from a 0.2 mum filtered solution of 20mM PB, 150mM NaCl, pH 7.2.
Purity/Purification	>95% as determined by reducing SDS-PAGE.
Preparation and Storage	Lyophilized protein should be stored at < -20 degree C, though stable at room temperature for 3 weeks. Reconstituted protein solution can be stored at 4-7 degree C for 2-7 days. Aliquots of reconstituted samples are stable at < -20 degree C for 3 months.
Molecular Weight	Molecular Mass: 12.2kDa Actual Protein Molecular Mass: 12kDa
3D Structure	ModBase 3D Structure for P20109
Active Protein Note	Protein activity can be an ambiguous term. Please refer to the data sheet or inquire with Technical Support to determine the definition of activity for this product.
Species	Mouse
Endotoxin	< 1.0 EU per mug as determined by the LAL method.
Activity	Measured in a cell proliferation assay using TF-1 human erythroleukemic cells. The ED50 for this effect is 0.1-1 ng/mll.
ISO Certification	Manufactured in an ISO 9001:2015 Certified Laboratory.
Related Product Information for IL-13 active protein	Protein Construction: Recombinant Mouse Interleukin-13 is produced by our E Coli expression system and the target gene encoding Pro22-Phe131 is expressed. Background: Mouse interleukin 13 (mIL-13) is a pleiotropic cytokine produced by activated Th2 cells. IL-13 induces B cell proliferation and immunoglobin production. It contains a four helical bundle with two internal disulfide bonds. Mouse IL13 shares 58% sequence identity with human protein and exhibits cross-species activity. IL13 signals via receptor IL13R (type2, IL4R) and activates STAT-6. IL13 initially binds IL-13Ralpha1 with low affinity and triggers association of IL4Ralpha, generating a high affinity heterodimeric receptor IL13R and eliciting downstream signals. IL13 also binds IL-13Ralpha2 with high affinity, which plays a role in a negative feedback system of IL13 signaling. IL13 is an important mediator of allergic inflammation and disease.
Other Notes	Small volumes of IL-13 active protein vial(s) may occasionally become entrapped in the seal of the product vial during shipment and storage. If necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the container`s cap. Certain products may require to ship with dry ice and additional dry ice fee may apply.
Searchable Terms for IL-13 purchase	MBS2557487 is an active protein targeting IL-13. Also known as Recombinant Mouse IL-13 Protein (Pro22-Phe131). Host: E Coli.

ADDITIONAL DETAILS

NCBI/Uniprot data below describe general gene information for IL-13. It may not necessarily be applicable to this product.

NCBI GI #	6680403
NCBI GeneID	16163
NCBI Accession #	NP_032381.1
UniProt Primary Accession #	P20109
UniProt Related Accession #	P20109
GenBank Nucleotide #	NP_032381.1
NCBI Official Full Name	interleukin-13
NCBI Official Synonym Full Names	interleukin 13
NCBI Official Symbol	Il13
NCBI Official Synonym Symbols	Il-13
UniProt Protein Name	Interleukin-13
UniProt Synonym Protein Names	T-cell activation protein P600
UniProt Gene Name	Il13
UniProt Synonym Gene Names	Il-13; IL-13
UniProt Entry Name	IL13_MOUSE
NCBI Protein Information	interleukin-13
UniProt Comments for IL-13	IL13: Cytokine. Inhibits inflammatory cytokine production. Synergizes with IL2 in regulating interferon-gamma synthesis. May be critical in regulating inflammatory and immune responses. Defects in IL13 may be a cause of susceptibility to allergic rhinitis (ALRH). Allergic rhinitis is a common disease of complex inheritance and is characterized by mucosal inflammation caused by allergen exposure. Belongs to the IL-4/IL-13 family. Protein type: Motility/polarity/chemotaxis; Secreted, signal peptide; Secreted Cellular Component: extracellular space; cytoplasm; extracellular region; external side of plasma membrane Molecular Function: interleukin-13 receptor binding; hematopoietin/interferon-class (D200-domain) cytokine receptor binding; cytokine activity Biological Process: response to nicotine; positive regulation of smooth muscle cell proliferation; regulation of proton transport; microglial cell activation; positive regulation of mast cell degranulation; positive regulation of connective tissue growth factor production; positive regulation of tyrosine phosphorylation of Stat6 protein; positive regulation of immunoglobulin production; positive regulation of protein secretion; positive regulation of B cell proliferation; positive regulation of ion transport; immune response; positive regulation of release of sequestered calcium ion into cytosol; inflammatory response; negative regulation of NAD(P)H oxidase activity; positive regulation of macrophage activation
Research Articles on IL-13	**1.** These data highlight an essential mechanism in asthma pathogenesis by demonstrating that ILC2s are responsible for bronchial epithelial TJ barrier leakiness through IL-13.
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