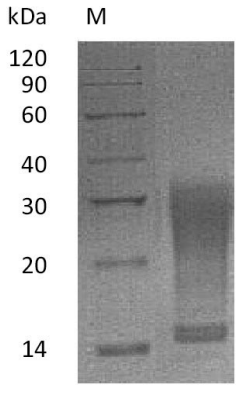
Recombinant Mouse Interleukin-13 (Il13), partial (Active)

Product Code	CSB-AP004761MO
Abbreviation	Recombinant Mouse Il13 protein, partial (Active)
Uniprot No.	P20109
Form	Lyophilized powder
Storage Buffer	Lyophilized from a 0.2 μm filtered 1xPBS, pH 7.4
Product Type	Interleukin
Immunogen Species	Mus musculus (Mouse)
Biological Activity	The ED50 as determined in a cell proliferation assay using TF?1 human erythroleukemic cells is 2-13 ng/ml.
Purity	Greater than 95% as determined by SDS-PAGE.
Sequence	SVSLPLTLKELIEELSNITQDQTPLCNGSMVWSVDLAAGGFCVALDSLTNISNC NAIYRTQRILHGLCNRKAPTTVSSLPDTKIEVAHFITKLLSYTKQLFRHGPF
Research Area	Immunology
Source	Mammalian cell
Target Names	Il13
Expression Region	26-131aa
Notes	Repeated freezing and thawing is not recommended. Store working aliquots at 4°C for up to one week.
Tag Info	C-terminal 6xHis-tagged
Mol. Weight	12.7 kDa
Protein Length	Partial

Image



(Tris-Glycine gel) Discontinuous SDS-PAGE (reduced) with 5% enrichment gel and 15% separation gel.

Description

Recombinant Mouse Interleukin-13 (Il13) is expressed in a mammalian cell

system and features a C-terminal 6xHis-tag for ease of purification. The protein represents a partial sequence spanning amino acids 26-131 and shows purity greater than 95% as verified by SDS-PAGE analysis. Biological activity appears robust, with an ED50 of 2-13 ng/ml in cell proliferation assays using TF-1 human erythroleukemic cells. Endotoxin levels remain below 1.0 EU/μg, as determined by the LAL method.

Interleukin-13 is a cytokine that plays a role in immune regulation and inflammation. T-helper type 2 cells primarily produce this protein, and it influences various cell types. This likely contributes to the pathophysiology of allergic responses and asthma. The protein serves as an important component for studying immune responses and understanding regulatory mechanisms in inflammatory processes.

Potential Applications

Note: The applications listed below are based on what we know about this protein's biological functions, published research, and experience from experts in the field. However, we haven't fully tested all of these applications ourselves yet. We'd recommend running some preliminary tests first to make sure they work for your specific research goals.

1. Cell Proliferation and Viability Assays

This recombinant mouse IL-13 protein can stimulate cell proliferation in responsive cell lines, as shown by its validated activity on TF-1 human erythroleukemic cells with an ED50 of 2-13 ng/ml. Researchers may use this protein to investigate IL-13-mediated cellular responses in various mouse and cross-reactive human cell types. The high purity (>95%) and low endotoxin levels (<1.0 EU/μg) appear suitable for sensitive cell culture experiments where contamination could confound results. The C-terminal His-tag allows for straightforward detection and quantification in experimental setups.

2. Cytokine Signaling Pathway Studies

The biologically active mouse IL-13 protein serves as a useful tool for investigating IL-13 receptor binding and downstream signaling cascades in vitro. This protein enables researchers to study STAT6 phosphorylation, JAK activation, and other IL-13-mediated signaling events in mouse cell lines or primary cells. The mammalian expression system likely ensures proper protein folding and post-translational modifications that are crucial for authentic receptor interactions. The defined activity range provides a reasonable starting point for dose-response experiments in signaling studies.

3. Antibody Development and Validation

This recombinant mouse IL-13 protein can serve as an antigen for developing and validating anti-IL-13 antibodies in research applications. The C-terminal His-tag enables straightforward immobilization on nickel-based surfaces for ELISA development, antibody screening, and binding affinity measurements. High purity suggests minimal cross-reactivity with contaminating proteins during

antibody characterization. Researchers may use this protein as a positive control in immunoassays and for antibody specificity testing in mouse-based research models.

4. Protein-Protein Interaction Studies

The His-tagged mouse IL-13 protein appears well-suited for pull-down assays and other protein interaction studies to identify IL-13 binding partners or receptor components. The tag enables protein immobilization on nickel-coated beads or columns for affinity purification experiments. Researchers can investigate IL-13 interactions with its receptors (IL-13Rα1, IL-13Rα2, IL-4Rα) or other potential binding proteins in cell lysates or purified protein systems. Low endotoxin content suggests that observed interactions are specific to IL-13 rather than contamination-induced artifacts.

5. Comparative Species and Cross-Reactivity Studies

This mouse IL-13 protein enables researchers to conduct comparative studies examining species-specific responses and cross-reactivity patterns between mouse and human IL-13 systems. The demonstrated activity on human TF-1 cells suggests potential cross-species functionality that can be systematically investigated across different cell types. Researchers may compare the potency and specificity of mouse IL-13 versus human IL-13 in various experimental systems. Such studies appear valuable for translational research where mouse models are used to study human IL-13-related pathways.

Endotoxin	Less than 1.0 EU/μg as determined by LAL method.
Reconstitution	We recommend that this vial be briefly centrifuged prior to opening to bring the contents to the bottom. Please reconstitute protein in deionized sterile water to a concentration of 0.1-1.0 mg/mL.We recommend to add 5-50% of glycerol (final concentration) and aliquot for long-term storage at -20°C/-80°C. Our default final concentration of glycerol is 50%. Customers could use it as reference.
Shelf Life	The shelf life is related to many factors, storage state, buffer ingredients, storage temperature and the stability of the protein itself. Generally, the shelf life of liquid form is 6 months at -20°C/-80°C. The shelf life of lyophilized form is 12 months at -20°C/-80°C.