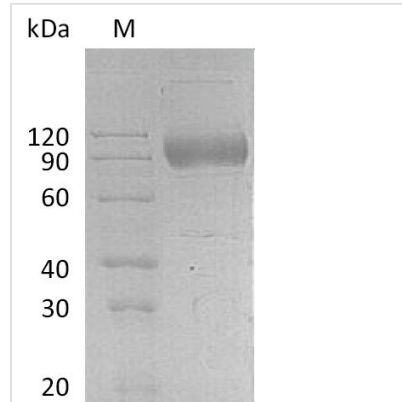




Recombinant Human Interleukin-17 receptor A (IL17RA), partial (Active)

Product Code	CSB-AP004351HU
Abbreviation	Recombinant Human IL17RA protein, partial (Active)
Uniprot No.	Q96F46
Form	Lyophilized powder
Storage Buffer	Lyophilized from a 0.2 µm filtered 1xPBS, pH 7.4
Product Type	Interleukin
Immunogen Species	Homo sapiens (Human)
Biological Activity	Measured by its binding ability in a functional ELISA. Immobilized Human IL-17RA-Fc at 2µg/ml can bind Anti-Human IL-17RA mAb, the ED50 of Anti-Human IL-17RA mAb is 13.50 ng/ml.
Purity	Greater than 90% as determined by SDS-PAGE.
Sequence	LRLLDHREALVCSQPGLNCTVKNSTCLDDSWIHPRNLTPSSPKDLQIQLHFAHT QQGDLFPVAHIEWTLQTDASILYLEGAELSVLQLNTNERLCVRFEFLSKLRHHH RRWRFTFSHFVVDPDQEYEVTVHHLPKPIPDGDPNHQSKNFLVPDCEHARMK VTTPCMSSGSLWDPNITVETLEAHQLRVSF TLWNETHYQILLTSFPHMENHS CFEHMHIPAPRPEEFHQRSNVTLT LRNLKGCCR HQVQIQPFSSCLNDCLR H SATVSCPEMPDTPEPIPDY MPLW
Research Area	Immunology
Source	Mammalian cell
Target Names	IL17RA
Expression Region	33-320aa
Notes	Repeated freezing and thawing is not recommended. Store working aliquots at 4°C for up to one week.
Tag Info	C-terminal hFc-tagged
Mol. Weight	60.6 kDa
Protein Length	Extracellular Domain
Image	



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

Description

Recombinant Human Interleukin-17 receptor A (IL17RA) is produced in a mammalian cell expression system, covering the extracellular region from amino acids 33 to 320. This protein is C-terminally Fc-tagged and exhibits a purity greater than 90%, as determined by SDS-PAGE. It maintains a low endotoxin level of less than 1.0 EU/μg according to the LAL method. Its biological activity is confirmed through functional ELISA, demonstrating a binding affinity with an ED50 of 13.50 ng/ml for Anti-Human IL-17RA monoclonal antibody.

Interleukin-17 receptor A (IL17RA) appears to be a crucial component of the IL-17 receptor complex, playing what seems to be a significant role in mediating immune responses. The receptor is involved in the signaling pathway of interleukin-17, a cytokine that promotes inflammatory responses. IL17RA has become essential in studies focusing on immune regulation and has been implicated in various research areas related to inflammation and immune system function.

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. Antibody Development and Characterization

This recombinant IL17RA extracellular domain can serve as an immunogen for generating monoclonal or polyclonal antibodies against human IL17RA. The Fc-tagged protein provides enhanced immunogenicity and makes purification easier for immunization protocols. The demonstrated binding activity with anti-IL17RA monoclonal antibodies, as shown in the functional ELISA, confirms the protein likely maintains proper folding and epitope presentation. Scientists can use this protein to screen and validate antibody specificity, affinity, and cross-reactivity across various immunoassay formats.

2. Protein-Protein Interaction Studies

The biologically active IL17RA extracellular domain can be used to investigate



binding interactions with IL-17 family cytokines and other potential ligands in vitro. The C-terminal Fc tag enables easy immobilization on protein A/G surfaces for surface plasmon resonance, bio-layer interferometry, or ELISA-based binding assays. Scientists can determine binding kinetics, affinity constants, and specificity profiles of IL17RA interactions. The mammalian expression system ensures proper glycosylation and post-translational modifications that may be critical for physiologically relevant binding studies.

3. Competitive Binding and Inhibition Assays

This recombinant protein can serve as a capture reagent in competitive binding assays to screen for small molecule inhibitors or competing proteins that disrupt IL17RA-ligand interactions. The established functional ELISA protocol with known ED50 values provides a validated platform for developing high-throughput screening assays. Scientists can immobilize the IL17RA-Fc protein and measure displacement of known binding partners by test compounds. The high purity and low endotoxin levels make it suitable for sensitive biochemical assays requiring minimal background interference.

4. Structural and Biophysical Characterization

The purified IL17RA extracellular domain can be used for structural biology studies including X-ray crystallography, NMR spectroscopy, or cryo-electron microscopy to elucidate the three-dimensional structure of the receptor. The protein's demonstrated biological activity suggests proper folding, making it suitable for biophysical analyses such as circular dichroism spectroscopy, dynamic light scattering, and thermal stability studies. The Fc tag can be removed enzymatically if needed for structural studies. Alternatively, the fusion protein can be analyzed to understand receptor dimerization and clustering mechanisms.

5. Cell-Based Receptor Binding Studies

This soluble IL17RA-Fc fusion protein can function as a decoy receptor in cell culture experiments to sequester IL-17 family cytokines and study their biological effects on target cells. Scientists can add the recombinant protein to cell culture media to competitively inhibit endogenous IL17RA signaling pathways. The Fc tag allows for easy detection and quantification of protein uptake or binding to cell surfaces using fluorescently labeled anti-Fc antibodies. The mammalian expression system ensures compatibility with human cell culture studies without species-specific glycosylation artifacts.

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.