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Recombinant Mouse IL-17A Protein (N-His)

Catalog Number:	671301, 671302
Size:	20 μg, 100 μg
Target Name:	IL-17A, Cytotoxic T-lymphocyte-associated antigen 8, cytotoxic T-lymphocyte-associated serine esterase
Regulatory Status:	RUO

PRODUCT DETAILS

Application:	Bioassay
Format:	Lyophilized from sterile PBS, pH 7.4.
Expression Host:	HEK293
Species:	Mouse
accession number:	Q62386
Sources:	A DNA sequence encoding the mature form of mouse IL17A (Q62386) (Thr22-Ala158) was expressed with a N-terminal His Tag.
Molecular Weight:	The protein has a predicted MW of 16.07 kDa. Due to glycosylation, the protein migrates to 18-24 kDa and 25-28 kDa based on Bis-Tris PAGE result.
Affinity Tag:	N-His
Purity:	≥95% as determined by SDS-PAGE.
Endotoxin level:	< 1.0 EU per μg protein
Protein Concentration:	Lyophilized
Storage and Handling:	Samples are stable for up to twelve months from date of receipt at -20℃ to -80℃. 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.

BACKGROUND INFORMATION

Mouse interleukin-17A (IL-17A), also known as CTLA-8, is a pro-inflammatory cytokine that plays a central role in immune defense, particularly against extracellular bacteria and fungi. It is primarily produced by T helper 17 (Th17) cells and is also secreted by γδ T cells, innate lymphoid cells, and other activated immune-cell populations. IL-17A promotes inflammation by stimulating epithelial cells, endothelial cells, fibroblasts, and macrophages to produce inflammatory mediators, chemokines, and antimicrobial peptides. These responses facilitate neutrophil recruitment and help strengthen mucosal and tissue defense against infection.

IL-17A belongs to the IL-17 cytokine family and is a disulfide-linked homodimeric protein. Each subunit contains approximately 150 amino acids and adopts a characteristic cysteine-knot-like structure stabilized by conserved disulfide bonds. IL-17A signals through a receptor complex composed primarily of IL-17RA and IL-17RC, both members of the IL-17 receptor family. Ligand binding activates intracellular signaling pathways involving the adaptor protein ACT1, TRAF6, NF-κB, and MAPK, leading to the expression of inflammatory cytokines and chemokines. IL-17A can also form a heterodimer with IL-17F, producing IL-17A/F, which activates the

same receptor complex.

IL-17A is important in host defense but can contribute to chronic inflammation and autoimmune pathology when excessively produced. Elevated IL-17A signaling has been implicated in experimental models of rheumatoid arthritis, psoriasis, multiple sclerosis, inflammatory bowel disease, and other inflammatory disorders. Persistent IL-17A activity can promote tissue inflammation, neutrophil accumulation, and pathological tissue damage.

Therapeutically, IL-17A is an important target for controlling inflammatory and autoimmune diseases. Neutralizing monoclonal antibodies against IL-17A or its receptor can suppress excessive inflammatory signaling. These approaches have demonstrated clinical effectiveness in conditions such as psoriasis, psoriatic arthritis, and axial spondyloarthritis, making IL-17A a well-established target for cytokine-directed immunotherapy.

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