

IL-17A Protein, Human (CHO)

Cat. No.:	HY-P73171
Synonyms:	CTLA8; CTLA-8; IL-17; Interleukin-17A; IL17A
Species:	Human
Source:	CHO
Accession:	Q16552 (G24-A155)
Gene ID:	3605
Molecular Weight:	Approximately 16&19&20 kDa

PROPERTIES

AA Sequence	M T P G K T S L V S L L L L L S L E A I V K A G I T I P R N P G C P N S E D K N F P R T V M V N L N I H N R N T N T N P K R S S D Y Y N R S T S P W N L H R N E D P E R Y P S V I W E A K C R H L G C I N A D G N V D Y H M N S V P I Q Q E I L V L R R E P P H C P N S F R L E K I L V S V G C T C V T P I V H H V A
Biological Activity	1. Measured by its binding ability in a functional ELISA. Immobilized human IL17A at 10 µg/mL (100 µl/well) can bind human IL17Ra and the EC ₅₀ is 20.0-48.0 ng/mL. 2. Measured by its ability to induce IL-6 secretion by NIH-3T3 mouse embryonic fibroblast cells in the presense of 20 ng/mL TNFα and the ED ₅₀ is 0.2-1 ng/mL.
Appearance	Lyophilized powder.
Formulation	Lyophilized from a 0.2 µm filtered solution of PBS, pH 7.4. Normally 5 % - 8 % trehalose, mannitol and 0.01% Tween 80 are added as protectants before lyophilization.
Endotoxin Level	<1 EU/µg, determined by LAL method.
Reconstitution	It is not recommended to reconstitute to a concentration less than 100 µg/mL in ddH ₂ O.
Storage & Stability	Stored at -20°C for 2 years. After reconstitution, it is stable at 4°C for 1 week or -20°C for longer (with carrier protein). It is recommended to freeze aliquots at -20°C or -80°C for extended storage.
Shipping	Room temperature in continental US; may vary elsewhere.

DESCRIPTION

Background	Interleukin-17A (IL-17A), also known as CTLA-8, belongs to the IL-17 cytokine family. IL-17A is expressed in memory Th17 cells and is a product of memory CD4 ⁺ T cells. IL-17A is also produced by a wide variety of immune cells, including CD8 ⁺ T
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cells, $\gamma\delta$ T cells, natural killer T (NKT) cells, monocytes, and neutrophils^{[1][2][3]}.

The human IL-17A shares 63.23% amino acid sequence identity with mouse and 61.90% identity with rat.

IL-17A plays a critical role in host defense mechanisms against many bacterial and fungal pathogens as well as allergic and autoimmune responses. IL-17A induces the production of antimicrobial peptides (defensins and S100 proteins), cytokines (IL-6, G-CSF, and GM-CSF), chemokines (CXCL1, CXCL5, IL-8, CCL2, and CCL7), and matrix metalloproteinases (MMP1, MMP3, and MMP13). IL-17A is detrimental in viral infection through promoting neutrophilic inflammation. IL-17A is a homodimeric cytokine and shares similar biological activities with IL-17F. IL-17A binds to IL-17RA with high affinity, and IL-17RA is required for the biological activity of IL-17A. In tumorigenesis, IL-17A recruits myeloid derived suppressor cells (MDSCs) to dampen anti-tumor immunity. IL-17A also enhances tumor growth in vivo through the induction of IL-6^{[1][2]}. IL-17A can be used for the research of autoimmune diseases, infection and cancer^{[1][4]}.

REFERENCES

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- [3]. Cua DJ, et al. Innate IL-17-producing cells: the sentinels of the immune system. *Nat Rev Immunol*. 2010 Jul;10(7):479-89.
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Caution: Product has not been fully validated for medical applications. For research use only.

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