

IL-17A Protein, Mouse (HEK293, His)

Cat. No.:	HY-P70753
Synonyms:	Interleukin-17A; IL-17; IL-17A; Cytotoxic T-Lymphocyte-Associated Antigen 8; CTLA-8; IL17A; CTLA8; IL17
Species:	Mouse
Source:	HEK293
Accession:	Q62386 (T22-A158)
Gene ID:	16171
Molecular Weight:	Approximately 17-26 kDa due to the glycosylation.

PROPERTIES

AA Sequence	<p> T V K A A A I I P Q S S A C P N T E A K D F L Q N V K V N L K V F N S L G A K V S S R R P S D Y L N R S T S P W T L H R N E D P D R Y P S V I W E A Q C R H Q R C V N A E G K L D H H M N S V L I Q Q E I L V L K R E P E S C P F T F R V E K M L V G V G C T C V A S I V R Q A A </p>
Biological Activity	Measured by its ability to induce IL-6 secretion by NIH-3T3 mouse embryonic fibroblast cells. The ED ₅₀ for this effect is 0.25-2.495 ng/mL, corresponding to a specific activity is 4.01×10 ⁵ - 4×10 ⁶ U/mg.
Appearance	Lyophilized powder
Formulation	Lyophilized from a 0.2 μm filtered solution of PBS, pH 7.4.
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. For long term storage it is recommended to add a carrier protein (0.1% BSA, 5% HSA, 10% FBS or 5% Trehalose).
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	<p>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 cells, γδT cells, natural killer T (NKT) cells, monocytes, and neutrophils^{[1][2][3]}.</p> <p>The mouse IL-17A shares 63.23% amino acid sequence identity with human and 87.33% identity with rat.</p> <p>IL-17A plays a critical role in host defense mechanisms against many bacterial and fungal pathogens as well as allergic and</p>
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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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Tel: 609-228-6898

Fax: 609-228-5909

E-mail: tech@MedChemExpress.com

Address: 1 Deer Park Dr, Suite Q, Monmouth Junction, NJ 08852, USA