

## IL-17A Protein, Human (CHO, His)

Cat. No.:	HY-P7373
Synonyms:	rHuIL-17A, His; CTLA-8; IL-17A
Species:	Human
Source:	CHO
Accession:	Q16552 (G24-A155)
Gene ID:	3605
Molecular Weight:	14-22 kDa

### PROPERTIES

AA Sequence	<p>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</p> <p>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</p> <p>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</p> <p>C T C V T P I V H H      V A H H H H H H</p>
Biological Activity	The ED <sub>50</sub> is <10 ng/mL as measured by NHDF cells, corresponding to a specific activity of >1 × 10 <sup>5</sup> units/mg.
Appearance	Lyophilized powder.
Formulation	Lyophilized after extensive dialysis against PBS.
Endotoxin Level	<0.2 EU/μg, determined by LAL method.
Reconstitution	It is not recommended to reconstitute to a concentration less than 100 μg/mL in ddH <sub>2</sub> 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. 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<sup>+</sup> T cells. IL-17A is also produced by a wide variety of immune cells, including CD8<sup>+</sup> T cells, γδT cells, natural killer T (NKT) cells, monocytes, and neutrophils<sup>[1][2][3]</sup>.</p> <p>The human IL-17A shares 63.23% amino acid sequence identity with mouse and 61.90% 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 autoimmune responses. IL-17A induces the production of antimicrobial peptides (defensins and S100 proteins), cytokines</p>
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(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<sup>[1][2]</sup>. IL-17A can be used for the research of autoimmune diseases, infection and cancer<sup>[1][4]</sup>.

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## REFERENCES

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- [1]. Chen K, et al. Interleukin-17A (IL17A). *Gene*. 2017 May 30;614:8-14.
- [2]. Iwakura Y, et al. The roles of IL-17A in inflammatory immune responses and host defense against pathogens. *Immunol Rev*. 2008 Dec;226:57-79.
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**Caution: Product has not been fully validated for medical applications. For research use only.**

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