

## CTLA-4 Protein, Human (HEK293)

<b>Cat. No.:</b>	HY-P72959
<b>Synonyms:</b>	Cytotoxic T-lymphocyte associated protein 4; CTLA4; CD152
<b>Species:</b>	Human
<b>Source:</b>	HEK293
<b>Accession:</b>	P16410 (K36-D161)
<b>Gene ID:</b>	1493
<b>Molecular Weight:</b>	Approximately 13.5 kDa

### PROPERTIES

<b>AA Sequence</b>	<p>           M A C L G F Q R H K    A Q L N L A T R T W    P C T L L F F L L F    I P V F C K A M H V            A Q P A V V L A S S    R G I A S F V C E Y    A S P G K A T E V R    V T V L R Q A D S Q            V T E V C A A T Y M    M G N E L T F L D D    S I C T G T S S G N    Q V N L T I Q G L R            A M D T G L Y I C K    V E L M Y P P P Y Y    L G I G N G T Q I Y    V I D P E P C P D S            D         </p>
<b>Appearance</b>	Lyophilized powder.
<b>Formulation</b>	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.
<b>Endotoxin Level</b>	<1 EU/µg, determined by LAL method.
<b>Reconstitution</b>	It is not recommended to reconstitute to a concentration less than 100 µg/mL in ddH <sub>2</sub> O.
<b>Storage &amp; Stability</b>	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.
<b>Shipping</b>	Room temperature in continental US; may vary elsewhere.

### DESCRIPTION

<b>Background</b>	<p>GMP CTLA-4, a pivotal inhibitory receptor, emerges as a principal negative regulator orchestrating T-cell responses within the intricate framework of immune modulation. This regulatory function stems from the distinctive property of GMP CTLA-4, displaying significantly heightened affinity for its natural B7 family ligands, CD80 and CD86, compared to the cognate stimulatory coreceptor CD28. This pronounced difference in binding affinity positions GMP CTLA-4 to competitively engage with CD80/B7-1 and CD86/B7.2, exerting a suppressive influence on T-cell activation and finely tuning immune responses. The homodimeric structure of GMP CTLA-4, intricately linked by disulfide bonds, further underscores its role as a molecular sentinel in immune regulation. Additionally, GMP CTLA-4 interacts with ICOSLG, contributing to its multifaceted</p>
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engagement in immune checkpoint pathways.

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**Caution: Product has not been fully validated for medical applications. For research use only.**

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