

Recombinant Human CTLA4 protein, His-tagged

Cat. No. CTLA4-2232H Lot. No. (See product label)

SPECIFICATION

Product Overview	Recombinant Human CTLA4 (Ala37-Phe162) protein was fused to His-tag at C-terminus and expressed in human 293 cells (HEK293).
Species	Human
Source	HEK293
ProteinLength	Ala37-Phe162
Description	<p>CTLA-4 (Cytotoxic T-Lymphocyte Antigen 4) is also known as CD152 (Cluster of differentiation 152), is a protein receptor that downregulates the immune system. CTLA4 is a member of the immunoglobulin superfamily, which is expressed on the surface of Helper T cells and transmits an inhibitory signal to T cells. The protein contains an extracellular V domain, a transmembrane domain, and a cytoplasmic tail. Alternate splice variants, encoding different isoforms. CTLA4 is similar to the T-cell co-stimulatory protein, CD28, and both molecules bind to CD80 and CD86, also called B7-1 and B7-2 respectively, on antigen-presenting cells. CTLA4 transmits an inhibitory signal to T cells, whereas CD28 transmits a stimulatory signal. Intracellular CTLA4 is also found in regulatory T cells and may be important to their function. T cell activation through the T cell receptor and CD28 leads to increased expression of CTLA-4, an inhibitory receptor for B7 molecules. Fusion proteins of CTLA4 and antibodies (CTLA4-Ig) have been used in clinical trials for rheumatoid arthritis.</p>
Predicted N Terminal	Ala37

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Form	Lyophilized from 0.22 µm filtered solution in PBS, pH7.4, 10% trehalose.
Molecular Mass	The protein has a calculated MW of 15.4 kDa. The protein migrates as 25-30 kDa under reducing (R) condition (SDS-PAGE) due to different extent glycosylation.
Endotoxin	Less than 1.0 EU per µg by the LAL method.
Purity	>95% as determined by SDS-PAGE.
Storage	For long term storage, the product should be stored at lyophilized state at -20 centigrade or lower. Please avoid repeated freeze-thaw cycles. This product is stable after storage at: -20 to -70 centigrade for 12 months in lyophilized state; -70 centigrade for 3 months under sterile conditions after reconstitution.
Reconstitution	It is recommended that sterile water be added to the vial to prepare a stock solution of 0.2 ug/ul. Centrifuge the vial at 4°C before opening to recover the entire contents.

GENE INFORMATION

Gene Name	CTLA4
Official Symbol	CTLA4
Synonyms	CTLA4; cytotoxic T-lymphocyte-associated protein 4; celiac disease 3, CELIAC3; cytotoxic T-lymphocyte protein 4; CD; CD28; CD152; GSE; ICOS; CD152 isoform; celiac disease 3; cytotoxic T-lymphocyte antigen 4; cytotoxic T-lymphocyte-associated antigen 4; cytotoxic T-lymphocyte-associated serine esterase-4; cytotoxic T lymphocyte associated antigen 4 short spliced form; ligand and transmembrane spliced cytotoxic T lymphocyte associated antigen 4; GRD4; CTLA-4; IDDM12;

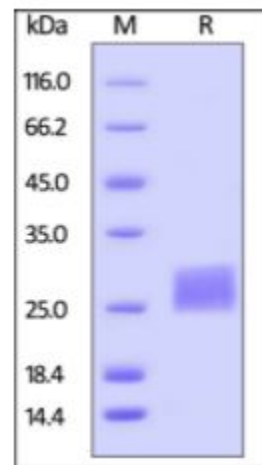
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CELIAC3

Gene ID	1493
mRNA Refseq	NM_001037631
Protein Refseq	NP_001032720
MIM	123890
UniProt ID	P16410

SDS-PAGE of
CTLA4-2232H

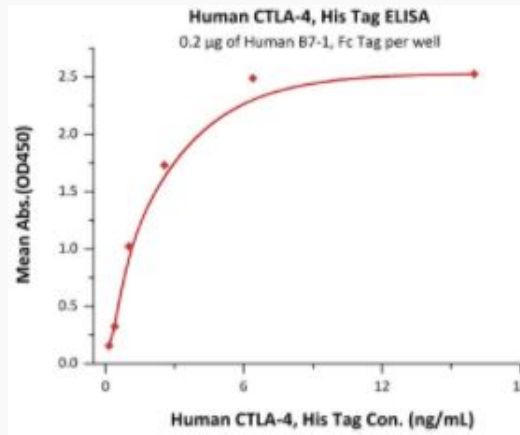
Human CTLA-4, His Tag on SDS-PAGE under reducing (R) condition. The gel was stained overnight with Coomassie Blue. The purity of the protein is greater than 95%.

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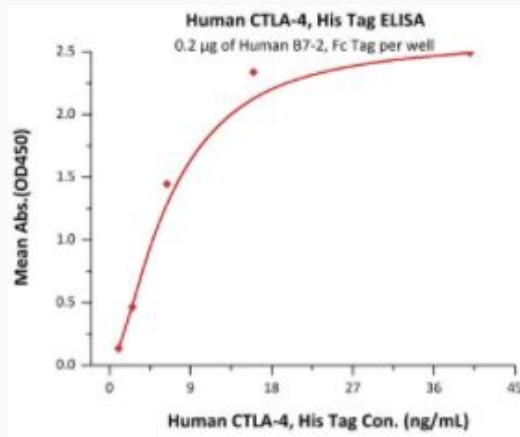
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**Bioactivity-ELISA of
CTLA4-2232H**




Immobilized Human B7-1, Fc Tag at 2 µg/mL (100 µL/well) can bind Human CTLA-4, His Tag with a linear range of 0.16-2.56 ng/mL (QC tested).


Bioactivity-ELISA



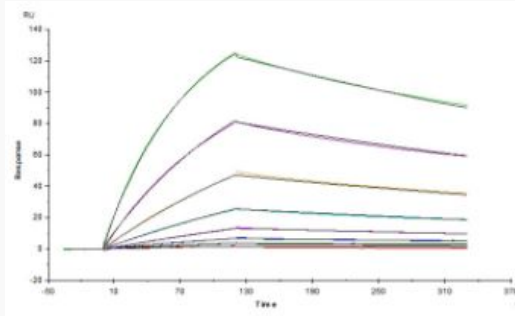
Immobilized Human B7-2, Fc Tag at 2 µg/mL (100 µL/well) can bind Human CTLA-4, His Tag with a linear range of 1-6.4 ng/mL (Routinely tested).

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Bioactivity-SPR of CTLA4-2232H



Yervoy (Ipilimumab, Human IgG1) captured on CM5 chip via anti-human IgG Fc antibodies surface, can bind Human CTLA-4, His Tag with an affinity constant of 25.7 nM as determined in a SPR assay (Biacore T200) (Routinely tested).

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