

# Recombinant human CTLA4 protein (Active) ab167727

[4 Images](#)

### Description

<b>Product name</b>	Recombinant human CTLA4 protein (Active)	
<b>Biological activity</b>	<p>Measured by its binding ability in a functional ELISA. Immobilized Human B7-1, Fc Tag (<b>ab173993</b>) at 2µg/mL (100 µL/well) can bind ab167727 with a linear range of 0.16-2.56 ng/mL.</p> <p>Measured by its binding ability in a functional ELISA. Immobilized Human B7-2, Fc Tag (<b>ab167720</b>) at 2µg/mL (100 µL/well) can bind ab167727 with a linear range of 1-6.4 ng/mL.</p> <p>Measured by its binding ability in an SPR assay. Yervoy (Ipilimumab, Human IgG1) captured on CM5 chip via anti-human IgG Fc antibodies surface, can bind ab167727 with an affinity constant of 25.7 nM.</p>	
<b>Purity</b>	> 95 % SDS-PAGE.	
<b>Endotoxin level</b>	< 1.000 Eu/µg	
<b>Expression system</b>	HEK 293 cells	
<b>Accession</b>	<b><u>P16410</u></b>	
<b>Protein length</b>	Protein fragment	
<b>Animal free</b>	No	
<b>Nature</b>	Recombinant	
<b>Species</b>	Human	
<b>Sequence</b>	AMHVAQPAVVCLASSRGIASFVCEYASPGKATEVRVTVLR QADSQVTEVCA ATYMMGNELTFLDDSICTGTSSGNQVNLTIQGLRAMDTGLY ICKVELMYP PPYYLGIGNGTQIYVIDPEPCPDSDF	
<b>Predicted molecular weight</b>	14 kDa including tags	
<b>Amino acids</b>	37 to 162	
<b>Tags</b>	His tag C-Terminus	

### Specifications

Our **Abpromise guarantee** covers the use of **ab167727** in the following tested applications.

The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

<b>Applications</b>	Functional Studies
	ELISA

SDS-PAGE

**Form** Lyophilized

## Preparation and Storage

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**Stability and Storage** Shipped at 4°C. Store at +4°C short term (1-2 weeks). Upon delivery aliquot. Store at -20°C or -80°C. Avoid freeze / thaw cycle.

pH: 7.40

Constituent: 99% PBS

Lyophilized from 0.22 µm filtered solution.

5-10% trehalose is commonly used for freeze drying, and after reconstitution, the trehalose is mostly about 3-5%

This product is an active protein and may elicit a biological response in vivo, handle with caution.

**Reconstitution** Reconstitute with sterile deionized water to a concentration of 200 µg/ml.

## General Info

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**Function** Inhibitory receptor acting as a major negative regulator of T-cell responses. The affinity of CTLA4 for its natural B7 family ligands, CD80 and CD86, is considerably stronger than the affinity of their cognate stimulatory coreceptor CD28.

**Tissue specificity** Widely expressed with highest levels in lymphoid tissues. Detected in activated T-cells where expression levels are 30- to 50-fold less than CD28, the stimulatory coreceptor, on the cell surface following activation.

**Involvement in disease** Genetic variation in CTLA4 influences susceptibility to systemic lupus erythematosus (SLE) [MIM:152700]. SLE is a chronic, inflammatory and often febrile multisystemic disorder of connective tissue. It affects principally the skin, joints, kidneys and serosal membranes. SLE is thought to represent a failure of the regulatory mechanisms of the autoimmune system. Note=Genetic variations in CTLA4 may influence susceptibility to Graves disease, an autoimmune disorder associated with overactivity of the thyroid gland and hyperthyroidism. Genetic variation in CTLA4 is the cause of susceptibility to diabetes mellitus insulin-dependent type 12 (IDDM12) [MIM:601388]. A multifactorial disorder of glucose homeostasis that is characterized by susceptibility to ketoacidosis in the absence of insulin therapy. Clinical features are polydipsia, polyphagia and polyuria which result from hyperglycemia-induced osmotic diuresis and secondary thirst. These derangements result in long-term complications that affect the eyes, kidneys, nerves, and blood vessels.

Genetic variation in CTLA4 is the cause of susceptibility to celiac disease type 3 (CELIAC3) [MIM:609755]. It is a multifactorial disorder of the small intestine that is influenced by both environmental and genetic factors. It is characterized by malabsorption resulting from inflammatory injury to the mucosa of the small intestine after the ingestion of wheat gluten or related rye and barley proteins. In its classic form, celiac disease is characterized in children by malabsorption and failure to thrive.

**Sequence similarities** Contains 1 Ig-like V-type (immunoglobulin-like) domain.

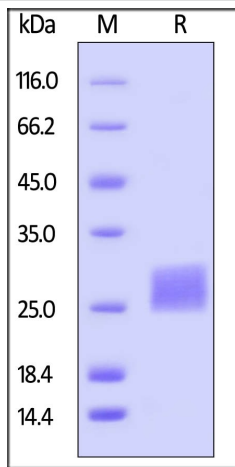
**Post-translational modifications** N-glycosylation is important for dimerization.

Phosphorylation at Tyr-201 prevents binding to the AP-2 adapter complex, blocks endocytosis, and leads to retention of CTLA4 on the cell surface.

## Cellular localization

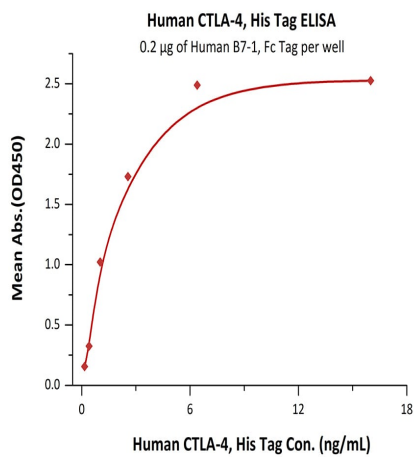
Cell membrane. Exists primarily an intracellular antigen whose surface expression is tightly regulated by restricted trafficking to the cell surface and rapid internalisation and.

## Images



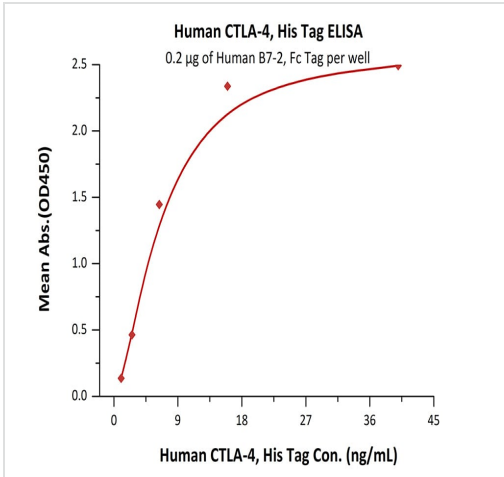
SDS-PAGE of reduced ab167727 stained overnight with Coomassie Blue. The protein migrates as 25-30 kDa under reducing conditions due to glycosylation.

SDS-PAGE - Recombinant Human CTLA4 protein (ab167727)



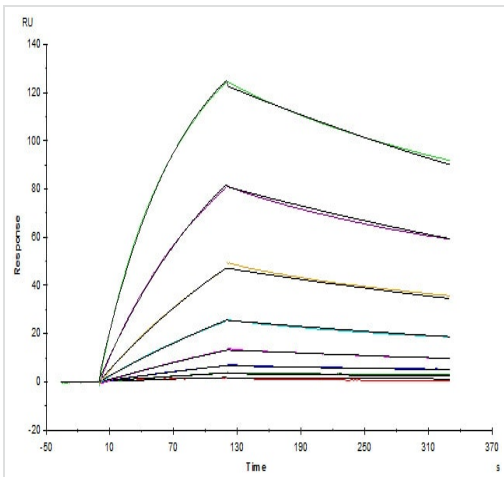
Immobilized Human B7-1, Fc Tag (**ab173993**) at 2µg/mL (100 µL/well) can bind ab167727 with a linear range of 0.16-2.56 ng/mL.

ELISA - Recombinant Human CTLA4 protein (ab167727)



Immobilized Human B7-2, Fc Tag (**ab167720**) at 2µg/mL (100 µL/well) can bind ab167727 with a linear range of 1-6.4 ng/mL.

ELISA - Recombinant Human CTLA4 protein (ab167727)



Yervoy (Ipilimumab, Human IgG1) captured on CM5 chip via anti-human IgG Fc antibodies surface, can bind ab167727 with an affinity constant of 25.7 nM as determined in SPR assay.

Functional Studies - Recombinant Human CTLA4 protein (ab167727)

**Please note:** All products are "FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC PROCEDURES"

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