

Product datasheet

Recombinant Human CTLA4 protein ab167727

4 Images

Description

Product name	Recombinant Human CTLA4 protein	
Purity	> 95 % SDS-PAGE.	
Endotoxin level	< 1.000 Eu/μg	
Expression system	HEK 293 cells	
Accession	P16410	
Protein length	Protein fragment	
Animal free	No	
Nature	Recombinant	
Species	Human	
Sequence	AMHVAQPAVVLASSRGIASFVCEYASPGKATEVRVTV LRQADSQVTEVCA ATYMMGNELTFLDDSICTGTSSGNQVNLTIQGLRAMDT GLYICKVELMYP PPYYLGIGNGTQIYVIDPEPCPDSDF	
Predicted molecular weight	14 kDa including tags	
Amino acids	37 to 162	
Tags	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.

Applications	SDS-PAGE
Form	Lyophilised

Preparation and Storage

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%

Reconstitution

It is recommended to reconstitute the lyophilized protein in 100 µl sterile deionized water to a final concentration of 1mg/ml. Solubilize for 30 to 60 minutes at room temperature with occasional gentle mixing. Carrier protein (0.1% HSA or BSA) is strongly recommended for further dilution and long term storage.

General Info

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

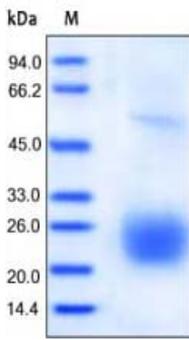
N-glycosylation is important for dimerization.

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

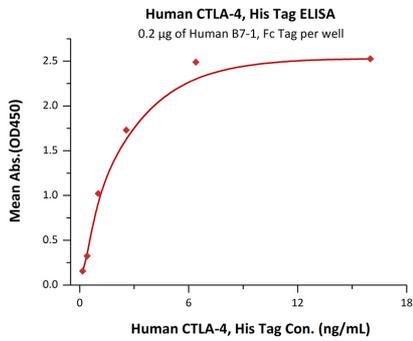
Cell membrane. Exists primarily an intracellular antigen whose surface expression is tightly regulated by restricted trafficking to the cell surface and rapid internalisation and.

Images



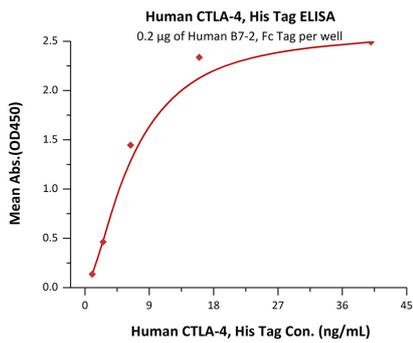
SDS-PAGE - Recombinant Human CTLA4 protein (ab167727)

SDS-PAGE of reduced ab167727 stained overnight with Coomassie Blue.



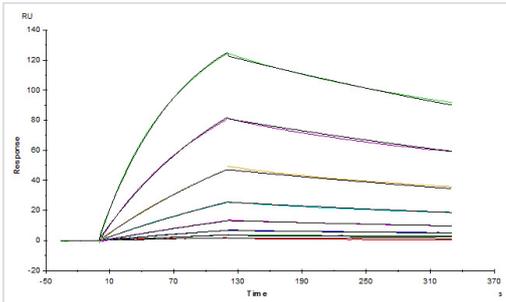
ELISA - Recombinant Human CTLA4 protein (ab167727)

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



Functional Studies - 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 is SPR assay.

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