

CD28 Protein, Human/Cynomolgus, Recombinant (His)

General Information

Synonyms:	CD28 antigen;CD28 molecule;T-cell-specific surface glycoprotein CD28;CD28;Tp44
Protein Construction:	Asn19-Pro152
Species:	Human,Cynomolgus
Expression Host:	HEK293 Cells
Accession:	P10747
Molecular Weight:	30-40 KDa (reducing condition)
AA Sequence:	Asn19-Pro152

QC Testing

Biological Activity:	1. Loaded Anti-Human CD28 mAb-Fc on Protein A Biosensor, can bind Human/Cynomolgus CD28-His with an affinity constant of 0.77 nM as determined in BLI assay. (Regularly tested) 2. Immobilized Human/Cynomolgus CD28-His at 2µg/ml (100 µl/well) can bind Anti-CD28 mAb The ED50 of Anti-CD28 mAb is 15.3 ng/ml. (Regularly tested)
Purity:	Greater than 95% as determined by reducing SDS-PAGE. (QC verified)
Endotoxin:	< 0.1 ng/µg (1 EU/µg) as determined by LAL test.
Formulation:	Lyophilized from a solution filtered through a 0.22 µm filter, containing 20 mM Tris-HCl, 150 mM NaCl, pH 8.0.

Preparation and Storage

Reconstitution:

Reconstitute the lyophilized protein in distilled water. The product concentration should not be less than 100 µg/ml. Before opening, centrifuge the tube to collect powder at the bottom. After adding the reconstitution buffer, avoid vortexing or pipetting for mixing.

Stability & Storage:

Lyophilized powders can be stably stored for over 12 months, while liquid products can be stored for 6-12 months at -80°C. For reconstituted protein solutions, the solution can be stored at -20°C to -80°C for at least 3 months. Please avoid multiple freeze-thaw cycles and store products in aliquots.

Actual storage temperature shall be subject to the COA.

Shipping:

In general, lyophilized powders are shipped with blue ice, while solutions are shipped with dry ice.

Protein Background

T-cell-specific surface glycoprotein CD28(CD28) is a single-pass type I membrane protein which contains one Ig-like V-type (immunoglobulin-like) domain. It belongs to the immunoglobulin(Ig) superfamily. CD28 is one of the molecules expressed on T cells that provide co-stimulatory signals, which are required for T cell activation. CD28

co-stimulation is necessary for CD4 positive T-cell proliferation and survival, interleukin-2 production, and T-helper type-2 development. Human post-thymic regulatory T cells require CD28 co-stimulation to expand and maintain potent suppressive function in vivo. Apoptosis plays a key role in the age-related decline of CD28 expression and in immunosenescence. CD28 is the receptor for CD80 (B7.1) and CD86 (B7.2). When activated by Toll-like receptor ligands, the CD80 expression is upregulated in antigen presenting cells (APCs). The CD86 expression on antigen presenting cells is constitutive. CD28 is the only B7 receptor constitutively expressed on naive T cells.

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