Overview

Synonyms	CD28 antigen (Tp44); CD28 antigen; CD28 molecule; CD28
Description	Human CD28 is composed of four exons encoding a protein of 220 amino acids that is expressed on the cell surface as a glycosylated, disulfide-linked homodimer of 44 kDa. Members of the CD28 family share a number of common features. These receptors consist of paired V-set immunoglobulin superfamily (IgSF) domains attached to single transmembrane domains and cytoplasmic domains that contain critical signaling motifs. The CD28 and CTLA4 ligands, CD80 and CD86, consist of single V-set and C1-set IgSF domains. The interaction of these costimulatory receptors with ligands is mediated through the MYPPPY motif within the receptor V-set domains. CD28 is expressed constitutively on almost all human CD4 T cells and approximately 50% of CD8 T cells. CD28 costimulation has diverse effects on T cell function, including biochemical events at the immunological synapse, downstream phosphorylation and other post-translational modifications, transcriptional changes, and cytoskeletal remodeling. At the most basic level, CD28 signals increase a cell's glycolytic rate, allowing cells to generate the energy necessary for growth and proliferation. Recombinant Human CD28 Fc Chimera produced in HEK293 cells is a polypeptide chain containing 363 amino acids with the C-termimal human IgG1 Fc fragment. A fully biologically active molecule, rhCD28 has a molecular mass of 66-70 kDa analyzed by reducing SDS-PAGE and is obtained by chromatographic techniques.
Source	HEK293
Biological Activity	Immobilized human CD28 Fcat 2μg/mL (100μL/well) can bind human Biotin-B7-1(CD80) Fc with a linear range of 0.01-0.5μg/mL when detected by Streptavidin-HRP second antibody.
Sequence	Asn^{19}-Pro^{152} (Accession #: P10747), expressed with a C-terminal human IgG1 Fc fragment. NKILVKQSPMLVAYDNAVNLSCKYSYNLF SREFRASLHKGLDSAVEVCVVYGNYSQQL QVYSKTGFNCDGKLGNESVTFYLQNLYVN QTDIYFCKIEVMYPPPYLDNEKSNGTIIH VKGKHLCPSPLFPGPSKP

Properties

Measured Molecular Weight	66~70 kDa, observed by reducing SDS-PAGE.
Purity	> 97% as analyzed by reducing SDS-PAGE.
Formulation	Lyophilized from a 0.2 μm filtered solution in PBS.
Reconstitution	Reconstituted in ddH_2O or PBS at 100 μg/ml.
Endotoxin Level	< 0.2 EU/μg, determined by LAL method.
Storage	Lyophilized recombinant CD28 Fc Chimera, Human remains stable up to 6 months at lower than -70°C from date of receipt. Upon reconstitution, Human CD28 Fc Chimera should be stable up to 1 week at 4°C or up to 3 months at -20°C. For long term storage it is recommended that a carrier protein (example 0.1% BSA) be added. Avoid repeated freeze-thaw cycles.

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