

Overview

Synonyms	Activation B7-2 antigen; B70; B7-2 antigen; B72; B7-2; B-lymphocyte activation antigen B7-2; BU63; CD28 antigen ligand 2; CD86; B7-2; B70; CD28LG2; LAB72; MGC34413
Description	B7-2, also known as CD86, B70, and ETC-1, is a 60-100 kDa variably glycosylated protein in the B7 family. B7 family members are transmembrane cell surface molecules that play important roles in immune activation and the maintenance of immune tolerance. B7-2 exists predominantly as a monomer on cell surfaces and interacts with two co-stimulatory receptors CD28 and cytotoxic T lymphocyte-associated antigen 4 (CTLA-4) expressed on T cells, and thus induces the signal pathways which regulate T cell activation and tolerance, cytokine production, and the generation of CTL. It is indicated that contacts between B and T helper cells mediated by CD86 encourage signals for the proliferation and IgG secretion of normal B cells and B cell lymphomas. B7-2 promotes the stabilization of CD28 in the IS, while the relative participation of B7-1 and B7-2 in T cell co-stimulation can also alter the Th1/Th2 bias of the immune response. Both B7-1 and B7-2 serve as cellular receptors for B species adenoviruses. Recombinant Human B7-2/CD86 produced in HEK293 cells is a polypeptide chain containing 228 amino acids with C-terminal 6His. A fully biologically active molecule, rhB7-2/CD86 has a molecular mass of 45-55 kDa analyzed by reducing SDS-PAGE and is obtained by chromatographic techniques.
Accession No	P42081
Species	Human
Source	HEK293
Biological Activity	Immobilized B7-2 His, Human at 5µg/mL (100 µL/well) can bind CTLA-4 Fc, Human with a linear range of 0.977-7.813ng/mL. Immobilized B7-2 His, Human at 5µg/mL (100 µL/well) can bind CD28 Fc, Human with a linear range of 0.78-6.25µg/mL.
Sequence	LSGAAPLK IQAYFNET ADLPCQFA NSQNQSLS ELVVFWDQ QENLVLNE VYLGKEKF DSVHSKYM GRTSFDSD SWTLRLHN LQIKDKGL YQCIHHK KPTGMIRI HQMNSELS VLANFSQP EIVPISNI TENVYINL TCSSIHGY PEPKKMSV LLRTKNST IEYDGVMQ KSQDNVTE LYDVSISL SVSFPDVT SNMTIFCI LETDKTRL LSSPFSIE LEDPQPPP DHIPHHHH HH

Properties

Measured Molecular Weight	45-55 kDa, observed by reducing SDS-PAGE.
Purity	> 95% as analyzed by reducing SDS-PAGE.
Formulation	Lyophilized from a 0.2 µm filtered solution in PBS, 5% trehalose and mannitol.
Reconstitution	Reconstituted in ddH ₂ O or PBS at 100 µg/ml.
Endotoxin Level	< 0.1 EU/µg, determined by LAL method.
Storage	Lyophilized recombinant B7-2/CD86 remains stable up to 12 months at lower than -70°C from date of receipt. Upon reconstitution, Human B7-2/CD86 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.
Note	For research use only

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