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# B7-2/CD86

Catalog # PVGS1522

## Product Information

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| **Primary Accession** | P42081 |
| **Species** | Human |
| **Sequence** | Leu20-Pro247 |
| **Purity** | > 95% as analyzed by SDS-PAGE |
| **Endotoxin Level** | |
| **Biological Activity** | Immobilized B7-2/CD86, hFc, Human at 5.0 μg/ml (100 μl/well) can bind human Biotin-CD28-Fc. |
| **Expression System** | HEK 293 |
| **Formulation** | Lyophilized from a 0.2 μm filtered solution in PBS, 5% trehalose and mannitol. |
| **Reconstitution** | It is recommended that this vial be briefly centrifuged prior to opening to bring the contents to the bottom. Reconstitute the lyophilized powder in dd$H_2O$ or PBS up to 100 μg/ml. |
| **Storage & Stability** | Upon receiving, this product remains stable for up to 6 months at lower than -70°C. Upon reconstitution, the product should be stable for 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. |

## Additional Information

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| **Gene ID** | 942 |
| **Other Names** | T-lymphocyte activation antigen CD86, Activation B7-2 antigen, B70, BU63, CTLA-4 counter-receptor B7.2, FUN-1, CD86, CD86, CD28LG2 |
| **Target Background** | B7-1 and B7-2 are homologous costimulatory ligands expressed on the surface of antigen presenting cells (APCs), both are type 1 transmembrane proteins with a membrane distal IgV and a membrane proximal IgC domain. They share ~25% sequence homology and interact with the same receptors, CD28 and CTLA-4.Binding of these molecules to the T cell costimulatory receptors, CD28 and CTLA-4, is essential for the activation and regulation of T cell immunity. T cell activation requires engagement of the T cell receptor (TCR) with the peptide–MHC complex presented on the cell surface of antigen presenting cells (APCs). In addition to this antigen-specific interaction, a second interaction involving costimulatory receptors (CD28, ICOS) on T cells and their respective ligands (B7-1/B7-2, ICOS-L) on APCs is required for optimal T cell activation. B7-1 and B7-2 may also function to deliver signal into dendritic cells. While B7-1 favors binding to CTLA-4, B7-2 shows a preference |

for CD28.

## Protein Information

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| **Name** | CD86 |
| **Synonyms** | CD28LG2 |
| **Function** | Receptor involved in the costimulatory signal essential for T-lymphocyte proliferation and interleukin-2 production, by binding CD28 or CTLA-4 (PubMed:12196291). May play a critical role in the early events of T-cell activation and costimulation of naive T-cells, such as deciding between immunity and anergy that is made by T-cells within 24 hours after activation (PubMed:7527824). Also involved in the regulation of B cells function, plays a role in regulating the level of IgG(1) produced. Upon CD40 engagement, activates NF-kappa-B signaling pathway via phospholipase C and protein kinase C activation (By similarity). |
| **Cellular Location** | Cell membrane; Single-pass type I membrane protein |
| **Tissue Location** | Expressed by activated B-lymphocytes and monocytes. |