human B7-2/CD86, Fc/His-Tag

B lymphocyte activation antigen B7-2

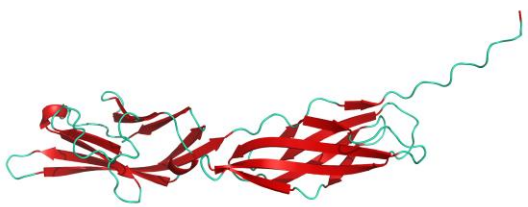
Cat. no. P2020-152

Product Information

Protein:	human B7-2/CD86, Fc/His-Tag (~ 54.5 kDa)
Uniprot#:	P42081
Sequence:	MLKIQAYFNETADLPCQFANSQNQSLSELVVFWQDQENLVLNEVYLGKEKFDSVHSKYMGR TSFDSDSWTLRLHNLQIKDKGLYQCIIHHKKPTGMIRIHQMNSELSVLANFSQPEIVPIS NITENVYINLTCSSIHGYPEPKKMSVLLRTKNSTIEYDGVMQKSQDNVTELYDVSISLSV SFPDVTSNMTIFCILETDKTRLLSSPFSIELEDPQPPPDHIP Methionine at pos. 1 might be present due to cloning constraints, C-terminal His-tag and Fc-fusion not shown in sequence.
Source:	Recombinantly expressed in HEK293.
Tag(s):	Fc/His-tag, C-terminal
Purification:	Purified by affinity chromatography and subsequent buffer exchange.
Formulation:	PBS; pH 7.4. Liquid, stored and shipped at -80 °C.
Purity:	> 95 % (will be determined by densitometry of Coomassie stained gel, example next page)
Concentration:	Will be determined by BCA-Assay.
Long-term storage:	No recommendations.
Comment:	Protein migrates at higher molecular weight during SDS-PAGE due to posttranslational modifications.

Background Information:

The cell surface glycoprotein B7-2, also known as cluster of differentiation 86 (CD86), belongs to the B7 family of co-stimulatory molecules, which are expressed on antigen-presenting cells (APCs), including dendritic cells, macrophages and B cells. Resting APCs express low levels of B7 molecules, but various stimuli, such as microbial products and cytokines produced during innate immune reactions against pathogens, induce an increased expression of B7 molecules in order to promote adaptive immune responses. This regulated expression ensures that T cells are activated only when needed. When T cells encounter antigens displayed by APCs, which is the first signal required for complete T cell activation, B7-2 interacts with CD28 providing a co-stimulatory signal, the second crucial signal. T cell activation leads to cytokine production and proliferation of T cells as well as differentiation into effector and memory T cells. This interaction is

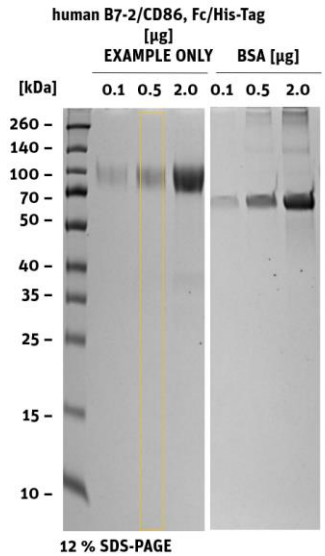


Structural model of human B7-2/CD86

Product Information

counterbalanced by the cytotoxic T lymphocyte antigen-4 (CTLA-4), which is expressed on T cells after antigen recognition and has a higher affinity for B7-2 than CD28. CTLA-4 provides inhibitory signals leading to downregulation of immune responses. Dysregulation of B7-2 causes autoimmune diseases, inflammatory disorders and cancer. Therefore, therapeutic strategies targeting B7-2 or its interactions are being explored to dampen autoimmune diseases and to enhance anti-cancer immunity.

Quality Information (provided for each lot):



SDS-PAGE/Coll.Coomassie

	Area	Percent
1	10101.134	100

Histogram (of marked lane in gel picture)