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CD86 Antibody

Catalog # ASC12117

Product Information

Application	WB, IHC-P, IF, E
Primary Accession	P42082
Other Accession	NP_787058
Host	Rabbit
Clonality	Polyclonal
Isotype	IgG
Clone Names	CD86
Calculated MW	34666

Additional Information

Gene ID	12524
Alias Symbol	CD86
Other Names	CD86 Antibody: CD86 molecule, B70, B7-2, B7.2, LAB72, CD28LG2
Target/Specificity	At least five isoforms of CD86 are known to exist; this antibody will detect all five isoforms.
Reconstitution & Storage	CD86 antibody can be stored at 4˚C for three months and -20˚C, stable for up to one year. As with all antibodies care should be taken to avoid repeated freeze thaw cycles. Antibodies should not be exposed to prolonged high temperatures.
Precautions	CD86 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	Cd86
Function	Receptor involved in the costimulatory signal essential for T-lymphocyte proliferation and interleukin-2 production, by binding CD28 or CTLA-4. 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. 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 (PubMed:23241883).
Cellular Location	Cell membrane; Single-pass type I membrane protein
Tissue Location	Expressed on activated B-cells.

Background

CD86, also known as B7-2, is a type I membrane protein that is a member of the immunoglobulin superfamily. Like the related protein CD80, this protein is expressed by antigen-presenting cells, and is the ligand for two proteins at the cell surface of T cells, CD28 and the cytotoxic T-lymphocyte-associated protein 4 (CTLA-4). Binding of this protein with CD28 antigen is a costimulatory signal for activation of the T-cell and induces T-cell proliferation and cytokine production. CTLA-4 binding negatively regulates T-cell activation and diminishes the immune response (1). Blocking the CTLA-4-CD80/CD86 interaction has been shown to enhance T-cell functions in acute lymphoblastomic leukemia (ALL), suggesting that this pathway may be an attractive target for future cancer immunotherapy (2).

References

Lane P. Regulation of T and B cell responses by modulating interactions between CD28/CTLA-4 and their ligands, CD80 and CD86. Ann NY Acad Sci 1997; 815:392-400.Feucht J, Kayser S, Gorodezki D, et al. T-cell responses against CD19+ pediatric acute lymphoblastic leukemia mediated by bispecific T-cell engager (BiTE) are regulated contrarily by PD-L1 and CD80/CD86 on leukemic blasts. Oncotarget 2016; 7:76902-19.