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CD28 Antibody [Clone CB28]

Purified Mouse Monoclonal Antibody
Catalog # AH10130

Product Information

Application	FC
Primary Accession	P10747
Reactivity	Human
Host	Mouse
Clonality	Monoclonal
Isotype	IgG1, kappa
Clone Names	CB28
Calculated MW	25066

Additional Information

Gene ID	940
Other Names	T-cell-specific surface glycoprotein CD28, TP44, CD28, CD28
Target/Specificity	Recombinant human CD28 protein
Application Note	Flow Cytometry 2.5ul (0.5ug) per test per one million cells.
Format	0.5 ml at 200ug/ml; Conjugated to PE
Storage	Store at 2 to 8°C.Antibody is stable for 24 months.
Precautions	CD28 Antibody [Clone CB28] is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	CD28
Function	Receptor that plays a role in T-cell activation, proliferation, survival and the maintenance of immune homeostasis (PubMed:1650475, PubMed:7568038). Functions not only as an amplifier of TCR signals but delivers unique signals that control intracellular biochemical events that alter the gene expression program of T-cells (PubMed:24665965). Stimulation upon engagement of its cognate ligands CD80 or CD86 increases proliferation and expression of various cytokines in particular IL2 production in both CD4(+) and CD8(+) T-cell subsets (PubMed:12196291, PubMed:1650475, PubMed:35397202). Mechanistically, ligation induces recruitment of protein kinase C-theta/PRKCQ and GRB2 leading to NF-kappa-B activation via both PI3K/Akt-dependent and -independent pathways (PubMed:21964608,

	PubMed:24665965, PubMed:7568038). In conjunction with TCR/CD3 ligation and CD40L costimulation, enhances the production of IL4 and IL10 in T- cells (PubMed:8617933).
Cellular Location	Cell membrane; Single-pass type I membrane protein
Tissue Location	Expressed in T-cells and plasma cells, but not in less mature B-cells

Background

Recognizes a glycoprotein of 44-88kDa, which is identified as CD28. It is the critical T-cell co-stimulatory receptor which provides to the cell the important second activation signal by binding CD80 and CD86 that are expressed by antigen presenting cells. Besides its co-stimulation role, CD28 functions in preventing T-cells from anergic hyporesponsive state or from undergoing premature apoptotic cell death. CD28 is also expressed on human fetal NK cells and some NK cell lines, whereas on murine NK cells the CD28 expression is much broader.

References

1. Marti F, Krause A, Post NH, Lyddane C, Dupont B, Sadelain M, King PD: Negative-feedback regulation of CD28 costimulation by a novel mitogen-activated protein kinase phosphatase, MKP6. J Immunol. 2001;166(1):197-206.
2. Scharschmidt E, Wegener E, Heissmeyer V, Rao A, Krappmann D: Degradation of Bcl10 induced by T-cell activation negatively regulates NF-kappa B signaling. Mol Cell Biol. 2004;24(9):3860-73.
3. Jeong SH, Qiao M, Nascimbeni M, Hu Z, Rehermann B, Murthy K, Liang TJ. Immunization with hepatitis C virus-like particles induces humoral and cellular immune responses in nonhuman primates. J Virol. 2004;78(13):6995-7003.

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.