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Anti-CD28 Antibody

Mouse Monoclonal Antibody
Catalog # AH13618

Product Information

Application	IF, FC
Primary Accession	P10747
Other Accession	591629
Reactivity	Human
Host	Mouse
Clonality	Monoclonal
Isotype	Mouse / IgG1
Clone Names	C28/1636
Calculated MW	25066

Additional Information

Gene ID	940
Other Names	T-cell-specific surface glycoprotein CD28; Tp44
Application Note	Flow Cytometry (0.5-1ug/million cells); ,Immunofluorescence (0.5-1ug/ml) ,Optimal dilution for a specific application should be determined.
Format	200ug/ml of Ab purified from Bioreactor Concentrate by Protein A/G. Prepared in 10mM PBS with 0.05% BSA & 0.05% azide. Also available WITHOUT BSA & azide at 1.0mg/ml.
Storage	Store at 2 to 8°C.Antibody is stable for 24 months.
Precautions	Anti-CD28 Antibody 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: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.