

Product datasheet for **TA399841**

CD28 Mouse Monoclonal Antibody [Clone ID: 9.3]

Product data:

Product Type:	Primary Antibodies
Clone Name:	9.3
Applications:	BI, ELISA, IF, IP
Reactivity:	Human
Host:	Mouse
Isotype:	IgG2a, kappa
Clonality:	Monoclonal
Immunogen:	The original antibody was generated by immunizing mice with human T cells.



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Specificity:	<p>The antibody is specific for human CD28. CD28 is one of the proteins expressed on T cells that provide co-stimulatory signals required for T cell activation and survival. T cell stimulation through CD28 in addition to the T-cell receptor (TCR) can provide a potent signal for the production of various interleukins.</p> <p>The antibody was found to induce T cell activation and proliferation in collaboration with TPA. Further, T cell proliferation was associated with IL-2 receptor expression and IL-2 production. The antibody stained 60-80% of the isolated T cells by immunofluorescence. The antibody immunoprecipitated CD28 from Jurkat cells. (Hara et al., 1985; PMID: 3159820). Immunofluorescence was performed on T cells expressing CD28 using this antibody. The antibody was cytotoxic for 50-80% of peripheral T cells and for 20-50% of thymocytes but it was not cytotoxic for cultured B-cell lines, normal B cells, or monocytes. In immune precipitation assays, the antibody reacted with CD28 (Hansen et al., 1980). The antibody induces proliferative responses in human T cells in in vitro experiments (Hutloff et al. 1999; PMID: 9930702). The antibody detected CD28 by western blot analysis (Siefken et al,1998; PMID: 9712026). Humanize, chimeric and hybrid Fab versions of the antibody were constructed. The ability of the three Fabs to bind to CD28 was examined by ELISA; the three Fabs showed a binding activity, with an EC50 of 630, 20 and 30 nM respectively for the humanized, the chimeric, hybrid Fab version. Thus, the humanized Fab showed a moderate loss in avidity. The three Fab versions of the antibody were tested for blocking ligation of CD28-Ig to CHO cells expressing CD80 and the binding was quantified by flow cytometry. The chimeric Fab exhibited the best blocking activity followed by the hybrid and the humanized Fab, with EC50 values of 0.2, 0.4, and 1.2 μM, respectively. Lastly, three Fab versions showed biological activity as an immunosuppressant by inhibiting a MLR (Tan et al. 2002; PMID: 12097421).</p>
Formulation:	PBS with 0.02% Proclin 300.
Concentration:	lot specific
Conjugation:	Unconjugated
Storage:	Store at 4°C for up to 3 months. For longer storage, aliquot and store at -20°C.
Database Link:	P10747
Synonyms:	T-cell-specific surface glycoprotein CD28; TP44