

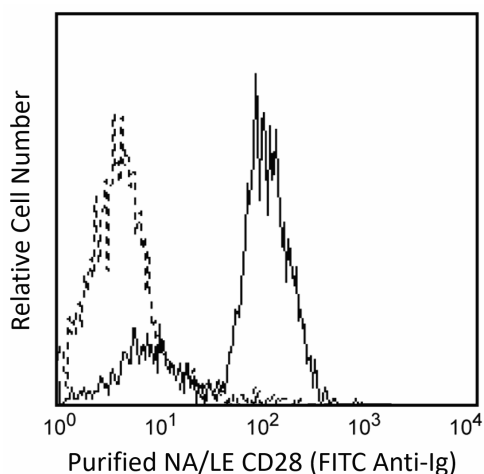
## Technical Data Sheet

**Purified NA/LE Mouse Anti-Human CD28****Product Information**

<b>Material Number:</b>	555725
<b>Alternate Name:</b>	CD28 antigen; T44; Tp44; TP44
<b>Size:</b>	0.5 mg
<b>Concentration:</b>	1.0 mg/ml
<b>Clone:</b>	CD28.2
<b>Immunogen:</b>	Human CD28 Transfected Cell Line
<b>Isotype:</b>	Mouse (C3H x BALB/c) IgG1, $\kappa$
<b>Reactivity:</b>	QC Testing: Human Tested in Development: Rhesus, Cynomolgus, Baboon
<b>Workshop:</b>	V 5T CD28.05
<b>Storage Buffer:</b>	No azide/low endotoxin: Aqueous buffered solution containing no preservative, sterile filtered(0.2 $\mu$ m pore size membrane). Endotoxin level is $\leq$ 0.1 EU/ $\mu$ g ( $\leq$ 0.01 ng/ $\mu$ g) of protein as determined by the LAL assay.

**Description**

The CD28.2 monoclonal antibody specifically binds to CD28, a 44 kDa homodimeric transmembrane glycoprotein present on most mature T cells, thymocytes and plasma cells. CD28 is a costimulatory receptor that binds CD80 and CD86 as ligands and plays a very important role in T cell-B cell interactions. It has been suggested that CD28 initiates and regulates a separate and distinct signal transduction pathway from those stimulated by the TCR complex. Additionally, it has been reported that CD28 antibody clones vary in their ability to stimulate T cells to produce IL-2 and increase intracellular Ca<sup>2+</sup> concentration. This finding suggests the existence of functionally distinct subregions on the CD28 molecule. CD28.2 has been demonstrated to bind to the same molecule as clone L293, another CD28 mAb, and has been reported to induce Ca<sup>2+</sup> influx in Jurkat T cells.



**Flow cytometric analysis of CD28 expression by human peripheral blood lymphocytes.** Human whole blood was stained with Purified NA/LE Mouse Anti-Human CD28 antibody (Cat. No. 555725/567116/567117; solid line histogram). The cells were washed and then counterstained with FITC Goat Anti-Mouse IgG/IgM (Cat. No. 555988). Erythrocytes were lysed with BD Pharm Lyse™ Lysing Buffer (Cat. No. 555899). A histogram showing the expression of CD28 (or Ig Isotype control staining shown as dashed line histogram) was generated from gated events with the forward and side-light scatter characteristics of viable lymphocytes. Flow cytometry and data analysis were performed using a BD Flow Cytometer System.

**Preparation and Storage**

Store undiluted at 4°C.

The monoclonal antibody was purified from tissue culture supernatant or ascites by affinity chromatography.

This preparation contains no preservatives, thus it should be handled under aseptic conditions.

**Application Notes****Application**

Flow cytometry	Routinely Tested
Bioassay	Tested During Development

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555725 Rev. 16



### Recommended Assay Procedure:

The CD28.2 monoclonal antibody is reportedly useful for multiple applications including the co-stimulated increase in cytokine production and proliferative responses by Anti-CD3 antibody-stimulated T cells.

### Suggested Companion Products

Catalog Number	Name	Size	Clone
555988	FITC Goat Anti-Mouse IgG/IgM	0.5 mg	Polyclonal
567116	Purified NA/LE Mouse Anti-Human CD28	5.0 mg	CD28.2
567117	Purified NA/LE Mouse Anti-Human CD28	2.0 mg	CD28.2
554657	Stain Buffer (BSA)	500 mL	(none)
554656	Stain Buffer (FBS)	500 mL	(none)

### Product Notices

1. Since applications vary, each investigator should titrate the reagent to obtain optimal results.
2. An isotype control should be used at the same concentration as the antibody of interest.
3. Please refer to <http://regdocs.bd.com> to access safety data sheets (SDS).
4. Species cross-reactivity detected in product development may not have been confirmed on every format and/or application.
5. Please refer to [wwwbdbiosciences.com/us/s/resources](http://wwwbdbiosciences.com/us/s/resources) for technical protocols.

### References

Kuiper H, Brouwer M, Vermeire S, van Lier R. Analysis of the Workshop CD28 Panel mAb: distinct signalling pathways coupled to CD28. In: Schlossman SF, Stuart F, Schlossman .. et al., ed. *Leucocyte typing V : white cell differentiation antigens : proceedings of the fifth international workshop and conference held in Boston, USA, 3-7 November, 1993*. Oxford: Oxford University Press; 1995:373-374. (Clone-specific: Activation, Calcium Flux, (Co)-stimulation)

Barclay NA, Brown MH, Birkeland ML, et al, ed. *The Leukocyte Antigen FactsBook*. San Diego, CA: Academic Press; 1997(Biology)

Olive D, Cerdan C, Costello R, et al. CD28 and CTLA-4 cluster report. In: Schlossman SF, Stuart F, Schlossman .. et al., ed. *Leucocyte typing V : white cell differentiation antigens : proceedings of the fifth international workshop and conference held in Boston, USA, 3-7 November, 1993*. Oxford: Oxford University Press; 1995:360-370. (Clone-specific: (Co)-stimulation, Flow cytometry, Functional assay, Inhibition, Stimulation)

Lin G-X, Yang X, Hollemweguer E, et al. Cross-reactivity of CD antibodies in eight animal species. In: Mason D, David Mason .. et al., ed. *Leucocyte typing VII : white cell differentiation antigens : proceedings of the Seventh International Workshop and Conference held in Harrogate, United Kingdom*. Oxford: Oxford University Press; 2002:519-523. (Clone-specific)

June CH, Bluestone JA, Nadler LM, Thompson CB. The B7 and CD28 receptor families. *Immunol Today*. 1994; 15(7):321-331. (Biology)

Nunes J, Klasen S, Franco MD, et al. Signalling through CD28 T-cell activation pathway involves an inositol phospholipid-specific phospholipase C activity. *Biochem J*. 1993; 293(3):835-842. (Clone-specific: Calcium Flux, (Co)-stimulation, Functional assay)

Nunes J, Klasen S, Ragueneau M, et al. CD28 mAbs with distinct binding properties differ in their ability to induce T cell activation : analysis of early and late activation events. *Int Immunol*. 1993; 5(3):311-315. (Immunogen: Calcium Flux, (Co)-stimulation, Flow cytometry, Functional assay, IC/FCM Block, Immunoprecipitation, Stimulation)