

TECHNICAL DATA SHEET

Biotin Anti-Human CD28 (CD28.2)

Catalog Number: 30-0289

PRODUCT INFORMATION

Contents: Biotin Anti-Human CD28 (CD28.2)

Isotype: Mouse IgG1, kappa

Concentration: 0.5 mg/mL

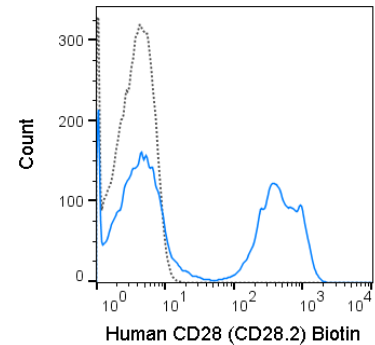
Clone: CD28.2

Reactivity: Human

Use By: 12 months from date of receipt

Storage Conditions: 2-8°C

Formulation: 10 mM NaH₂PO₄, 150 mM NaCl, 0.09% NaN₃, pH 7.2



Human peripheral blood lymphocytes were stained with 0.25 ug Biotin Anti-Human CD28 (30-0289) (solid line) or 0.25 ug Biotin Mouse IgG1 isotype control (dashed line), followed by Streptavidin PE.

DESCRIPTION

The CD28.2 antibody reacts with human CD28, a 44 kDa type I surface glycoprotein which acts as a co-stimulatory receptor in support of the T cell receptor (TCR). CD28 exists as a homodimer with specificity for two known ligands, known as B7-1 (CD80) and B7-2 (CD86), which are expressed on activated B cells and antigen-presenting cells. These ligands trigger CD28 signaling in concert with TCR activation to drive T cell proliferation, induce high-level expression of IL-2, impart resistance to apoptosis, and enhance T cell cytotoxicity. The interaction / co-stimulatory signaling between the B7 ligands and CD28 provides crucial communication between T cells and B cells or APCs to coordinate the adaptive immune response. Other members of the CD28 family of receptors include CTLA-4 (CD152), PD-1 (CD279), ICOS and BTLA. The CD28.2 antibody may be used as a phenotypic marker for human CD28, expressed on all CD4+ T cells and CD8+ T cells, and is widely used as a reagent for activation of the CD28 receptor *in vitro* and *in vivo* (use format suitable for functional assays). This antibody is also reported to be cross-reactive with several non-human species, including Baboon, Chimpanzee, Cynomolgus, and Rhesus.

PREPARATION & STORAGE

This monoclonal antibody was purified from tissue culture supernatant via affinity chromatography. The purified antibody was conjugated under optimal conditions, with unreacted biotin removed from the preparation. It is recommended to store the product undiluted at 4°C and protected from prolonged exposure to light. Do not freeze.

APPLICATION NOTES

This antibody preparation has been quality-tested for flow cytometry using an appropriate cell type (as indicated). Please refer to the figure legend for the optimal concentration used to stain the tissue shown. We recommend titrating the antibody under your specific conditions to determine the optimal concentration of antibody needed in your experimental system.

REFERENCES

Griffin GK, Newton G, Tarrío ML, Bu D-X, Maganto-García E, Azcutia V, Alcaide P, Grabie N, Luscinskas FW, Croce KJ, and Lichtman AH. 2012. *J. Immunol.* 188: 6287-6299. (in vitro activation) Cocchi F, DeVico AL, Lu W, Popovic M, Latiinovic O, Sajadi MM, Redfield RR, Lafferty MK, Galli M, Garzino-Demo A, and Gallo RC. 2012. *Proc. Natl. Acad. Sci.* 109: 5411-5416. (in vitro activation) Okoye AA, Rohankhedkar M, Abana C, Pattenn A, Reyes M, Pexton C, Lum R, Sylwester A, Planer SL, Legasse A, Park BS, Piatak M, Lifson JD, Axthelm MK and Picker LJ. 2012. *J. Exp. Med.* 209: 641-651. (Flow cytometry) Vanderford TH, Slichter C, Rogers KA, Lawson BO, Obaede R, Else J, Villinger F, Bosinger SE, and Silvestri G. 2012. *Blood.* 119: 5750-5757. (Flow cytometry – Sooty Mangabey) Ansari AA, Reimann KA, Mayne AE, Takahashi Y, Stephenson ST, Wang R, Wang X, Li J, Price AA, Little DM, Zaidi M, Lyles R, and Villinger F. 2011. *J. Immunol.* 186: 1044-1059. (Flow cytometry – Rhesus macaque) Soto PC, Stein LL, Hurtado-Ziola N, Hedrick SA, and Varki A. 2010. *J. Immunol.* 184: 4185-4195. (in vitro activation – Chimpanzee) Di Carlo E, D'Antuono T, Pompa P, Giuliani R, Rosini S, Stuppia L, Musiani P, and Sorrentino C. 2009. *Clin. Cancer Res.* 15: 2979-2987. (Immunohistochemistry – frozen tissue) Berg M and Zavazava N. 2008. *J. Leukoc. Biol.* 83: 852-863. (Immunoprecipitation) Fos C, Salles A, Lang V, Carrette F, Audebert S, Pastor S, Ghiotto M, Olive D, Bismuth G, and Nunes JA. 2008. *J. Immunol.* 181: 1969-1977. (Immunoprecipitation, Flow cytometry)

Tonbo Biosciences tests all antibodies by flow cytometry. Citations are provided as a resource for additional applications that have not been validated by Tonbo Biosciences. Please choose the appropriate format for each application and consult Materials and Methods sections for additional details about the use of any product in these publications.

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