

1P-287-T100

Monoclonal Antibody to CD80 Phycoerythrin (PE) conjugated (100 tests)

Clone:	MEM-233
Isotype:	Mouse IgG1
Specificity:	The antibody MEM-233 reacts with CD80 (B7-1), a 60 kDa single chain type I glycoprotein of immunoglobulin supergene family, expressed on professional antigen-presenting cells, such as dendritic cells, macrophages or activated B lymphocytes.
Regulatory Status:	RUO
Immunogen:	Extracellular domain of human CD80 fused to human IgG1(Fc)
Species Reactivity:	Human
Preparation:	The purified antibody is conjugated with R-Phycoerythrin (PE) under optimum conditions. The conjugate is purified by size-exclusion chromatography and adjusted for direct use. No reconstitution is necessary.
Storage Buffer:	The reagent is provided in stabilizing phosphate buffered saline (PBS) solution containing 15mM sodium azide.
Storage / Stability:	Store in the dark at 2-8°C. Do not freeze. Avoid prolonged exposure to light. Do not use after expiration date stamped on vial label.
Usage:	The reagent is designed for Flow Cytometry analysis of human blood cells using 20 µl reagent / 100 µl of whole blood or 10 ⁶ cells in a suspension. The content of a vial (2 ml) is sufficient for 100 tests.
Expiration:	See vial label
Lot Number:	See vial label
Background:	CD80 (B7-1) and CD86 (B7-2) are ligands of T cell critical costimulatory molecule CD28 and of an inhibitory receptor CTLA-4 (CD152). The both B7 molecules are expressed on professional antigen-presenting cells and are essential for T cell activation, the both molecules can also substitute for each other in this process. The question what are the differences in CD80 and CD86 competency has not been fully elucidated yet; there are still conflicts in results about their respective roles in initiation or sustaining of the T cell immune response.

For laboratory research only, not for drug, diagnostic or other use.

**Antibodies****References:**

- *Vasilevko V, Ghochikyan A, Holterman MJ, Agadjanyan MG: CD80 (B7-1) and CD86 (B7-2) are functionally equivalent in the initiation and maintenance of CD4+ T-cell proliferation after activation with suboptimal doses of PHA. *DNA Cell Biol.* 2002 Mar;21(3):137-49.
- *Yadav D, Judkowski V, Flodstrom-Tullberg M, Sterling L, Redmond WL, Sherman L, Sarvetnick N. B7-2 (CD86) controls the priming of autoreactive CD4 T cell response against pancreatic islets. *J Immunol.* 2004 Sep 15;173(6):3631-9.
- *Thomas IJ, Petrich de Marquesini LG, Ravanan R, Smith RM, Guerder S, Flavell RA, Wraith DC, Wen L, Wong FS. CD86 has sustained costimulatory effects on CD8 T cells. *J Immunol.* 2007 Nov 1;179(9):5936-46.
- *Eri R, Kodumudi KN, Summerlin DJ, Srinivasan M. Suppression of colon inflammation by CD80 blockade: Evaluation in two murine models of inflammatory bowel disease. *Inflamm Bowel Dis.* 2008 Jan 9
- *Campioni D, Moretti S, Ferrari L, Punturieri M, Castoldi GL, Lanza F: Immunophenotypic heterogeneity of bone marrow-derived mesenchymal stromal cells from patients with hematologic disorders: correlation with bone marrow microenvironment. *Haematologica.* 2006 Mar;91(3):364-8.
- *Zhan H, Towler HM, Calder VL: The immunomodulatory role of human conjunctival epithelial cells. *Invest Ophthalmol Vis Sci.* 2003 Sep;44(9):3906-10.
- *Kolar GR, Mehta D, Pelayo R, Capra JD: A novel human B cell subpopulation representing the initial germinal center population to express AID. *Blood.* 2007 Mar 15;109(6):2545-52.
- *Lee DJ, Sieling PA, Ochoa MT, Krutzik SR, Guo B, Hernandez M, Rea TH, Cheng G, Colonna M, Modlin RL: LILRA2 activation inhibits dendritic cell differentiation and antigen presentation to T cells. *J Immunol.* 2007 Dec 15;179(12):8128-36.
- *Hovden AO, Karlsen M, Jonsson R, Aarstad HJ, Appel S: Maturation of monocyte derived dendritic cells with OK432 boosts IL-12p70 secretion and conveys strong T-cell responses. *BMC Immunol.* 2011 Jan 5;12:2.
- *Immunolipoplexes: an efficient, nonviral alternative for transfection of human dendritic cells with potential for clinical vaccination. *Mol Ther.* 2005 May;11(5):790-800.
- *Silk KM, Leishman AJ, Nishimoto KP, Reddy A, Fairchild PJ: Rapamycin Conditioning of dendritic cells differentiated from human ES cells promotes a tolerogenic phenotype. *J. Biomed. Biotechnol.*, vol. 2012, article ID 172420, 11 pages, doi:10.1155/2012/172420
- *Derdak SV, Kueng HJ, Leb VM, Neunkirchner A, Schmetterer KG, Bielek E, Majdic O, Knapp W, Seed B, Pickl WF: Direct stimulation of T lymphocytes by immunosomes: virus-like particles decorated with T cell receptor/CD3 ligands plus costimulatory molecules. *Proc Natl Acad Sci U S A.* 2006 Aug 29;103(35):13144-9.

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