

TECHNICAL DATA SHEET

CyFlow™ CD80 PE-Cy7 **Anti-Hu; Clone MEM-233**

REF AR682958

For Research Use Only.
Not for use in diagnostic or therapeutic procedures.

Specifications

Antigen	CD80
Alternative Names	B7- B7-1, BB1
Clone	MEM-233
Clonality	monoclonal
Format	PE-Cy7
Host / Isotype	Mouse / IgG1
Species Reactivity	Human
Negative Species Reactivity	—
Quantity	100 tests
Immunogen	Extracellular domain of human CD80 fused to human IgG1(Fc)

Specificity

The mouse monoclonal antibody MEM-233 recognizes CD80 antigen, 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.

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Application

The reagent is designed for Flow Cytometry analysis of human blood cells. Recommended usage is 4 µl reagent / 100 µl of whole blood or 10⁶ cells in a suspension. The content of a vial (0.4 ml) is sufficient for 100 tests.

Other usages may be determined from the scientific literature.

Storage Buffer

The reagent is provided in stabilizing phosphate buffered saline (PBS) solution, pH ≈7.4, containing 0.1% (w/v) sodium azide.

Storage and Stability

Storage	Avoid prolonged exposure to light. Store in the dark at 2-8°C. Do not freeze.
Stability	Do not use after expiration date stamped on vial label.

Background Information

CD80 (B7-1) and CD86 (B7-2) are ligands of T cell critical costimulatory molecule CD28 and of an inhibitory receptor CD152 (CTLA-4). 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.

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. < PMID: 12015893 >
- Zhan H, Towler HM, Calder VL: The immunomodulatory role of human conjunctival epithelial cells. Invest Ophthalmol Vis Sci. 2003 Sep; 44(9):3906-10. < PMID: 12939308 >
- 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. < PMID: 15356107 >

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- Tan PH, Beutelspacher SC, Wang YH, McClure MO, Ritter MA, Lombardi G, George AJ: Immunolipoplexes: an efficient, nonviral alternative for transfection of human dendritic cells with potential for clinical vaccination. *Mol Ther*. 2005 May; 11(5):790-800. < PMID: 15851017 >
- 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. < PMID: 16531259 >
- 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. < PMID: 18056355 >
- 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. < PMID: 17132718 >
- Thomas IJ, Petrich de Marquesini LG, Ravanani 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. < PMID: 17947667 >
- Eri R, Kodumudi KN, Summerlin DJ, Srinivasan M: Suppression of colon inflammation by CD80 blockade: evaluation of two murine models of inflammatory bowel disease. *Inflamm Bowel Dis*. 2008 Jan 9; < PMID: 21061388 >
- 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. < PMID: 21208424 >
- 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*. 2012; 2012:172420. < PMID: 22505805 >

The Safety Data Sheet for this product is available at www.sysmex-partec.com/services.

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