

## TECHNICAL DATA SHEET

### CyFlow™ CD86 PE-Cy5 Anti-Hu; Clone BU63

**REF** AP229007

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

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## Specifications

<b>Antigen</b>	CD86
<b>Alternative Names</b>	B70, B7-2
<b>Clone</b>	BU63
<b>Clonality</b>	monoclonal
<b>Format</b>	PE-Cy5
<b>Host / Isotype</b>	Mouse / IgG1
<b>Species Reactivity</b>	Human
<b>Negative Species Reactivity</b>	—
<b>Quantity</b>	100 tests
<b>Immunogen</b>	B-lymphoblastoid cell line ARH 77

## Specificity

The mouse monoclonal antibody BU63 recognizes CD86 antigen, a 70 kDa type I transmembrane 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 10<sup>6</sup> 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

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

## Background Information

CD86 (B7-2) and CD80 (B7-1) 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, 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

- Doussis IA, Gatter KC, Mason DY: CD68 reactivity of non-macrophage derived tumours in cytological specimens. *J Clin Pathol.* 1993 Apr; 46(4):334-6. < PMID: 7684403 >
- Engel P, Gribben JG, Freeman GJ, Zhou LJ, Nozawa Y, Abe M, Nadler LM, Wakasa H, Tedder TF: The B7-2 (B70) costimulatory molecule expressed by monocytes and activated B lymphocytes is the CD86 differentiation antigen. *Blood.* 1994 Sep 1; 84(5):1402-7. < PMID: 7520767 >
- Caux C, Vanbervliet B, Massacrier C, Azuma M, Okumura K, Lanier LL, Banchereau J: B70/B7-2 is identical to CD86 and is the major functional ligand for CD28 expressed on human dendritic cells. *J Exp Med.* 1994 Nov 1; 180(5):1841-7. < PMID: 7525840 >

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- Mauri D, Wyss-Coray T, Gallati H, Pichler WJ: Antigen-presenting T cells induce the development of cytotoxic CD4+ T cells (I): Involvement of the CD80-CD28 adhesion molecules. *J Immunol*. 1995 Jul 1; 155(1):118-27. < PMID: 7541409 >
- Kishimoto T, Goyert S, Kikutani H, Mason D, Miyasaka M, Moretta L, Ohno T, Okumura K, Shaw S, Springer TA, Sugamura K, Sugawara H, von dem Borne AEGK, Zola H (Eds): *Leucocyte Typing VI*. Garland Publishing Inc, New York. 1997; 1-1342. < NLM ID: 9712219 >
- 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 >
- Giguere JF, Bounou S, Paquette JS, Madrenas J, Tremblay MJ: Insertion of host-derived costimulatory molecules CD80 (B7.{01}) and CD86 (B7.2) into human immunodeficiency virus type 1 affects the virus life cycle. *J Virol*. 2004 Jun; 78(12):6222-32. < PMID: 15163715 >
- 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 >
- Chan A, Baird M, Mercer AA, Fleming SB: Maturation and function of human dendritic cells are inhibited by orf virus-encoded interleukin-10. *J Gen Virol*. 2006 Nov; 87(11):3177-81. < PMID: 17030850 >
- 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, Ravanian 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 >

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