

# Anti-Human CD80 (B7-1) Antibody, Clone 2D10.4, PE

Mouse monoclonal antibody against human, rhesus CD80 (B7-1), PE-conjugated

Catalog #100-1599

100 Tests

5 µL/test

## Product Description

This monoclonal antibody reacts with human cluster of differentiation 80 (CD80), also known as B7-1, a 60 kDa single chain type I transmembrane glycoprotein belonging to the immunoglobulin superfamily. CD80 is expressed by activated B cells, T cells, macrophages, and dendritic cells. CD80 has high affinity for binding to two T cell receptors; CD28 and CD152 (also known as CTLA-4). The interaction of CD80 with CD28 provides a potent co-stimulatory signal for T cell activation through the CD3 complex, while its interaction with CD152 provides an inhibitory signal for T cell activation. CD80 together with CD86, another ligand of CD28 also known as B7-2, plays a major role in regulation of T cell activation. CD80 dysfunction is associated with diseases such as squamous cell carcinoma of gallbladder (SCC) and myocarditis. This antibody can also be used as a marker to assess classically activated type 1 (M1) macrophages.

Target Antigen:	CD80 (B7-1)
Alternative Names:	B7, B7-1, B7.1, BB1, CD28LG, CD28LG1, LAB7
Gene ID:	941
Species Reactivity:	Human, Rhesus
Host Species:	Mouse
Clonality:	Monoclonal
Clone:	2D10.4
Isotype:	IgG1, kappa
Immunogen:	Not determined
Conjugate:	PE (Phycoerythrin)

## Applications

**Verified Applications:** FC

**Reported Applications:** FC

**Special Applications:** This antibody clone has been verified for labeling CD80+ primary human M1 macrophages grown in ImmunoCult™-SF Macrophage Medium (Catalog #10961) containing Human Recombinant M-CSF (Catalog #78057), and then polarized with Human Recombinant IFN-gamma (Catalog #78020) and Lipopolysaccharide from E. coli (O55:B5) (Catalog #100-1270).

Abbreviations: CellSep: Cell separation; ChIP: Chromatin immunoprecipitation; FA: Functional assay; FACS: Fluorescence-activated cell sorting; FC: Flow cytometry; FCXM: Flow cytometric crossmatch assay; FISH: Fluorescence in situ hybridization; ICC: Immunocytochemistry; IF: Immunofluorescence microscopy; IHC: Immunohistochemistry; IHC-F: Immunohistochemistry (frozen-tissue); IHC-P: Immunohistochemistry (paraffin-embedded); IP: Immunoprecipitation; NMR: Nuclear magnetic resonance spectroscopy; RIA: Radioimmunoassay; WB: Western blotting

## Properties

**Product Formulation:** Phosphate-buffered saline, pH 7.2, containing 0.09% sodium azide and 0.1% gelatin

**Purification:** The antibody was purified by affinity chromatography and conjugated with PE under optimal conditions. The solution is free of unconjugated PE.

**Stability and Storage:** Product stable at 2 - 8°C when stored undiluted. Do not freeze. Protect product from prolonged exposure to light. Stable until expiry date (EXP) on label.

**Directions for Use:** For flow cytometry, the suggested use of this antibody is 5 µL per 1 x 10<sup>6</sup> cells in 100 µL. It is recommended that the antibody be titrated for optimal performance for each application.

## Related Products

For a complete list of antibodies, including other conjugates, sizes, and clones, as well as related products available from STEMCELL Technologies, visit [www.stemcell.com/antibodies](http://www.stemcell.com/antibodies), or contact us at [techsupport@stemcell.com](mailto:techsupport@stemcell.com).

## References

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