



## CD80 Antibody [2D10.4]

CATALOG NUMBER: 76-034

### Specifications

|                             |  |
|-----------------------------|--|
| <b>SPECIES REACTIVITY:</b>  | Mouse  |
| <b>TESTED APPLICATIONS:</b> | FACS, Func   |
| <b>USER NOTE:</b>           | Optimal dilutions for each application to be determined by the researcher.   |
| <b>SPECIFICITY:</b>         | The 2D10.4 antibody reacts with human CD80, also known as B7-1, a 55 kDa type I transmembrane protein ligand for CD152 (CTLA-4) and for CD28, a co-stimulatory receptor for the T cell receptor (TCR). |
| <b>HOST SPECIES:</b>        | Mouse  |

### Properties

|                            |  |
|----------------------------|--|
| <b>PURIFICATION:</b>       | The monoclonal antibody was purified utilizing affinity chromatography. The endotoxin level is determined by LAL test to be less than 0.01 EU/μg of the protein. |
| <b>PHYSICAL STATE:</b>     | liquid   |
| <b>BUFFER:</b>             | Phosphate-buffered aqueous solution, pH7.2.  |
| <b>CONCENTRATION:</b>      | 1 mg/mL  |
| <b>STORAGE CONDITIONS:</b> | The product should be stored undiluted at 4°C . Do not freeze.   |
| <b>CLONALITY:</b>          | Monoclonal   |
| <b>ISOTYPE:</b>            | Mouse IgG1, kappa  |
| <b>CONJUGATE:</b>          | Unconjugated   |

### Additional Info

|                         |  |
|-------------------------|--|
| <b>ALTERNATE NAMES:</b> | B7, BB1, B7-1, B7.1, LAB7, CD28LG, CD28LG1, CD80 |
| <b>OFFICIAL SYMBOL:</b> | CD80   |
| <b>GENE ID:</b>         | 941  |

### Background

|                    |   |
|--------------------|---|
| <b>BACKGROUND:</b> | The 2D10.4 antibody reacts with human CD80, also known as B7-1, a 55 kDa type I transmembrane protein ligand for CD152 (CTLA-4) and for CD28, a co-stimulatory receptor for the T cell receptor (TCR). CD28 also binds a second B7 ligand known as CD86 (B7-2). Both CD80 and CD86 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 or CTLA-4 provides crucial communication between T cells and B cells or APCs to coordinate the adaptive immune response. |
| <b>REFERENCES:</b> | <p>1) Leucocyte Typing VI: White Cell Differentiation Antigens: Proceedings of the Sixth International Workshop and Conference Held in Kobe, Japan, 10-14 November 1996. Garland Pub., 1998.</p> <p>2) Cognasse, F., Hamzeh Cognasse, H., Lafarge, S., Chavarin, P., Pozzetto, B., Richard, Y., Garraud, O. (2008). Identification of two subpopulations of purified human blood B cells, CD27<sup>+</sup> CD23<sup>+</sup> and CD27<sup>high</sup> CD80<sup>+</sup>, that strongly express cell surface Toll like receptor 9 and secrete high levels of interleukin 6. <i>Immunology</i>, 125(3), 430-437.</p> <p>3) Bashuda, H., Kimikawa, M., Seino, K., Kato, Y., Ono, F., Shimizu, A., ... Okumura, K. (2005). Renal allograft</p>                           |

**FOR RESEARCH USE ONLY**

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