

B7-2 (2Q1692): sc-70396

BACKGROUND

T cell proliferation and lymphokine production are triggered by occupation of the TCR by antigen, followed by a costimulatory signal that is delivered by a ligand expressed on antigen presenting cells. The B7-related cell surface proteins B7-1 (CD80) and B7-2 (CD86) expressed on antigen presenting cells bind the homologous T cell receptors CD28 and CTLA-4 (cytotoxic T lymphocyte-associated protein-4) and trigger costimulatory signals for optimal T cell activation. CTLA-4 shares 31% overall amino acid identity with CD28, and it has been proposed that CD28 and CTLA-4 are functionally redundant. SLAMF is a novel receptor on T cells that, when engaged, potentiates T cell expansion in a CD28-independent manner. B7, also designated BB1, is another ligand or counterreceptor for CD28 and CTLA-4 that is expressed on the antigen-presenting cell.

REFERENCES

- Hathcock, K.S., et al. 1993. Identification of an alternative CTLA-4 ligand costimulatory for T cell activation. *Science* 262: 905-907.
- Freeman, G.J., et al. 1993. Uncovering of functional alternative CTLA-4 counter-receptor in B7-deficient mice. *Science* 262: 907-909.
- Laszlo, G., et al. 1993. Characterization of a novel cell-surface molecule expressed on subpopulations of activated T and B cells. *J. Immunol.* 150: 5252-5262.
- Larsen, C.P., et al. 1994. Regulation of immunostimulatory function and costimulatory molecule (B7-1 and B7-2) expression on murine dendritic cells. *J. Immunol.* 152: 5208-5219.
- June, C.H., et al. 1994. The B7 and CD28 receptor families. *Immunol. Today* 15: 321-331.
- Hathcock, K.S., et al. 1994. Comparative analysis of B7-1 and B7-2 costimulatory ligands: expression and function. *J. Exp. Med.* 180: 631-640.

CHROMOSOMAL LOCATION

Genetic locus: Cd86 (mouse) mapping to 16 B3.

SOURCE

B7-2 (2Q1692) is a rat monoclonal antibody raised against LPS activated B cells of mouse origin.

PRODUCT

Each vial contains 200 µg IgG_{2a} in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin. Also available azide-free for blocking assays, sc-70396 L, 200 µg/0.1 ml.

B7-2 (2Q1692) is available conjugated to either phycoerythrin (sc-70396 PE) or fluorescein (sc-70396 FITC), 200 µg/ml, for IF, IHC(P) and FCM.

STORAGE

Store at 4° C, ****DO NOT FREEZE****. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

APPLICATIONS

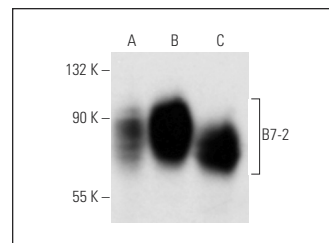
B7-2 (2Q1692) is recommended for detection of B7-2 of mouse origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and flow cytometry (1 µg per 1 x 10⁶ cells).

Suitable for use as control antibody for B7-2 siRNA (m): sc-29775, B7-2 shRNA Plasmid (m): sc-29775-SH and B7-2 shRNA (m) Lentiviral Particles: sc-29775-V.

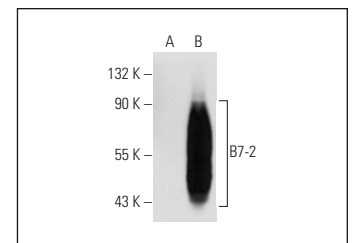
Molecular Weight of B7-2: 70 kDa.

Positive Controls: B7-2 (m): 293T Lysate: sc-118657, RAW 264.7 whole cell lysate: sc-2211 or mouse spleen extract: sc-2391.

DATA



B7-2 (2Q1692): sc-70396. Western blot analysis of B7-2 expression in RAW 264.7 (A) and I-11.15 (B) whole cell lysates and mouse spleen tissue extract (C).



B7-2 (2Q1692): sc-70396. Western blot analysis of B7-2 expression in non-transfected: sc-117752 (A) and mouse B7-2 transfected: sc-118657 (B) 293T whole cell lysates.

SELECT PRODUCT CITATIONS

- Lian, Z.R., et al. 2012. Suppression of histone deacetylase 11 promotes expression of IL-10 in Kupffer cells and induces tolerance following orthotopic liver transplantation in rats. *J. Surg. Res.* 174: 359-368.

RESEARCH USE

For research use only, not for use in diagnostic procedures.

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.



See **B7-2 (D-6): sc-28347** for B7-2 antibody conjugates, including AC, HRP, FITC, PE, and Alexa Fluor® 488, 546, 594, 647, 680 and 790.