SANTA CRUZ BIOTECHNOLOGY, INC.

B7-2 (GL1): sc-52448

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

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. SLAM 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

1. Hathcock, K.S., et al. 1993. Identification of an alternative CTLA-4 ligand costimulatory for T cell activation. Science 262: 905-907.
2. Freeman, G.J., et al. 1993. Uncovering of functional alternative CTLA-4 counter-receptor in B7-deficient mice. Science 262: 907-909.
3. 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.
4. 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.
5. June, C.H., et al. 1994. The B7 and CD28 receptor families. Immunol. Today 15: 321-331.
6. 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.
7. Han, S., et al. 1995. Cellular interaction in germinal centers. Roles of CD40 ligand and B7-2 in established germinal centers. J. Immunol. 155: 556-567.

CHROMOSOMAL LOCATION

Genetic locus: CD86 (human) mapping to 3q13.33; Cd86 (mouse) mapping to 16 B3.

SOURCE

B7-2 (GL1) 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.

B7-2 (GL1) is available conjugated to either phycoerythrin (sc-52448 PE) or fluorescein (sc-52448 FITC), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM.

APPLICATIONS

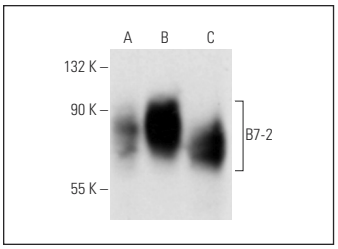
B7-2 (GL1) is recommended for detection of B7-2 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and flow cytometry (1 µg per 1 x 10^6 cells).

Suitable for use as control antibody for B7-2 siRNA (h): sc-29774, B7-2 siRNA (m): sc-29775, B7-2 shRNA Plasmid (h): sc-29774-SH, B7-2 shRNA Plasmid (m): sc-29775-SH, B7-2 shRNA (h) Lentiviral Particles: sc-29774-V and B7-2 shRNA (m) Lentiviral Particles: sc-29775-V.

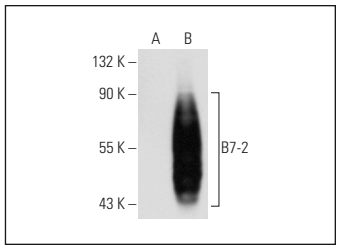
Molecular Weight of B7-2: 70 kDa.

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 (GL1): sc-52448. 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 (GL1): sc-52448. 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

1. Amirrad, F., et al. 2021. Arrhythmogenic hearts in PKD2 mutant mice are characterized by cardiac fibrosis, systolic, and diastolic dysfunctions. Front. Cardiovasc. Med. 8: 772961.
2. Amirrad, F., et al. 2022. Hypertrophic and fibrotic human PKD hearts are associated with macrophage infiltration and abnormal TGF-β1 signaling. Cell Tissue Res. E-published.

STORAGE

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

RESEARCH USE

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

CONJUGATES

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.