

B7-2 (BU63): sc-19617

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.

CHROMOSOMAL LOCATION

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

SOURCE

B7-2 (BU63) is a mouse monoclonal antibody raised against ARH-77 (B-lymphoblastoid cell line) of human origin.

PRODUCT

Each vial contains 200 µg IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

B7-2 (BU63) is available conjugated to agarose (sc-19617 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-19617 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-19617 PE), fluorescein (sc-19617 FITC), Alexa Fluor[®] 488 (sc-19617 AF488), Alexa Fluor[®] 546 (sc-19617 AF546), Alexa Fluor[®] 594 (sc-19617 AF594) or Alexa Fluor[®] 647 (sc-19617 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor[®] 680 (sc-19617 AF680) or Alexa Fluor[®] 790 (sc-19617 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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APPLICATIONS

B7-2 (BU63) is recommended for detection of B7-2 of resting monocytes and dendritic cells, and activated T, B and natural killer cells 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 10⁶ 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.

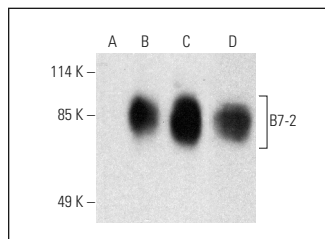
Molecular Weight of B7-2: 70 kDa.

Positive Controls: B7-2 (h2): 293T Lysate: sc-175289, Raji whole cell lysate: sc-364236 or BJAB whole cell lysate: sc-2207.

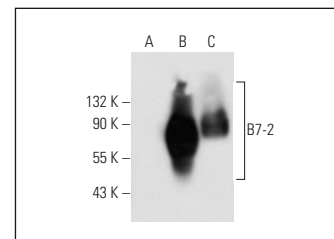
STORAGE

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

DATA



B7-2 (BU63) HRP: sc-19617 HRP. Direct western blot analysis of B7-2 expression in non-transfected 293T: sc-117752 (A), human B7-2 transfected 293T: sc-175289 (B), sc-114494 (C) and BJAB (D) whole cell lysates.



B7-2 (BU63): sc-19617. Western blot analysis of B7-2 expression in non-transfected 293T: sc-117752 (A), human B7-2 transfected 293T: sc-175289 (B) and Raji (C) whole cell lysates.

SELECT PRODUCT CITATIONS

- Means, R., et al. 2007. The Kaposi's sarcoma-associated herpesvirus K5 E3 ubiquitin ligase modulates targets by multiple molecular mechanisms. *J. Virol.* 81: 6573-6583.
- Landsverk, O.J., et al. 2012. Differential regulation of MHC II and invariant chain expression during maturation of monocyte-derived dendritic cells. *J. Leukoc. Biol.* 91: 729-737.
- McNally, A.K., et al. 2015. Phenotypic expression in human monocyte-derived interleukin-4-induced foreign body giant cells and macrophages *in vitro*: dependence on material surface properties. *J. Biomed. Mater. Res. A* 103: 1380-1390.
- Chen, C.L., et al. 2017. Hepatitis C virus has a genetically determined lymphotropism through co-receptor B7.2. *Nat. Commun.* 8: 13882.
- Hagiwara, S.I., et al. 2019. Plasma corticotropin-releasing factor receptors and B7-2⁺ extracellular vesicles in blood correlate with irritable bowel syndrome disease severity. *Cells* 8: 101.
- Jin, S., et al. 2020. Curcumin prevents osteocyte apoptosis by inhibiting M1-type macrophage polarization in mice model of glucocorticoid-associated osteonecrosis of the femoral head. *J. Orthop. Res.* 38: 2020-2030.
- Kim, J., et al. 2021. Interleukin-17 induced by cumulative mild stress promoted depression-like behaviors in young adult mice. *Mol. Brain* 14: 11.
- Matsusaka, K., et al. 2022. Distinct roles in phagocytosis of the early and late increases of cell surface calreticulin induced by oxaliplatin. *Biochem. Biophys. Rep.* 29: 101222.

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.