SANTA CRUZ BIOTECHNOLOGY, INC.

B7-2 (D-6): sc-28347

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.

CHROMOSOMAL LOCATION

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

SOURCE

B7-2 (D-6) is a mouse monoclonal antibody raised against amino acids 24-223 of B7-2 of human origin.

PRODUCT

Each vial contains 200 µg IgG_1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

B7-2 (D-6) is available conjugated to agarose (sc-28347 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-28347 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-28347 PE), fluorescein (sc-28347 FITC), Alexa Fluor® 488 (sc-28347 AF488), Alexa Fluor® 546 (sc-28347 AF546), Alexa Fluor® 594 (sc-28347 AF594) or Alexa Fluor® 647 (sc-28347 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-28347 AF680) or Alexa Fluor® 790 (sc-28347 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Alexa Fluor® is a trademark of Molecular Probes, Inc., Oregon, USA

APPLICATIONS

B7-2 (D-6) is recommended for detection of B7-2 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, 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), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

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.

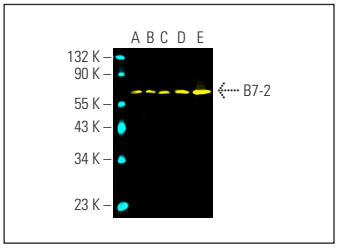
Molecular Weight of B7-2: 70 kDa.

Positive Controls: NAMALWA cell lysate: sc-2234, IB4 whole cell lysate: sc-364780 or Jurkat whole cell lysate: sc-2204.

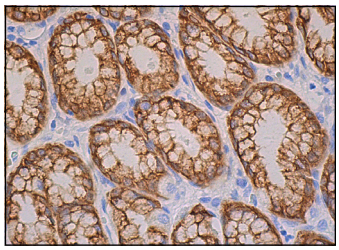
STORAGE

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

DATA



B7-2 (D-6) Alexa Fluor® 488: sc-28347 AF488. Direct fluorescent western blot analysis of B7-2 expression in Raji (**A**), Ramos (**B**), Jurkat (**C**), IB4 (**D**) and NAMALWA (**E**) whole cell lysates. Blocked with UltraCruz® Blocking Reagent: sc-516214. Cruz Marker™ Molecular Weight Standards detected with Cruz Marker MW Tag-Alexa Fluor® 647: sc-516791.



B7-2 (D-6): sc-28347. Immunoperoxidase staining of formalin fixed, paraffin-embedded human lower stomach tissue showing membrane and cytoplasmic staining of glandular cells.

SELECT PRODUCT CITATIONS

1. Spencer, M., et al. 2010. Adipose tissue macrophages in Insulin-resistant subjects are associated with collagen VI and fibrosis and demonstrate alternative activation. Am. J. Physiol. Endocrinol. Metab. 299: E1016-E1027.
2. La Rocca, G., et al. 2013. Human Wharton's jelly mesenchymal stem cells maintain the expression of key immunomodulatory molecules when subjected to osteogenic, adipogenic and chondrogenic differentiation *in vitro:* new perspectives for cellular therapy. Curr. Stem Cell Res. Ther. 8: 100-113.
3. Spencer, M., et al. 2014. Pioglitazone treatment reduces adipose tissue inflammation through reduction of mast cell and macrophage number and by improving vascularity. PLoS ONE 9: e102190.
4. Armas-González, E., et al. 2015. Differential antigen-presenting B cell phenotypes from synovial microenvironment of patients with rheumatoid and psoriatic arthritis. J. Rheumatol. 42: 1825-1834.
5. Chen, C.L., et al. 2017. Hepatitis C virus has a genetically determined lymphotropism through co-receptor B7-2. Nat. Commun. 8: 13882.
6. Jaiswal, A., et al. 2019. MicroRNA-99a mimics inhibit M1 macrophage phenotype and adipose tissue inflammation by targeting TNFα. Cell. Mol. Immunol. 16: 495-507.
7. Xue, J., et al. 2019. The role of dendritic cells regulated by HMGB1/TLR4 signalling pathway in myocardial ischaemia reperfusion injury. J. Cell. Mol. Med. 23: 2849-2862.
8. Zhao, Y.Z., et al. 2021. Polylysine-bilirubin conjugates maintain functional islets and promote M2 macrophage polarization. Acta Biomater. 122: 172-185.

RESEARCH USE

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