

B7-1 (N-20): sc-1634

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 CD80 (B7-1) and CD86 (B7-2) are expressed on antigen presenting cells, bind the homologous T cell receptors CTLA-4 (cytotoxic T lymphocyte-associated protein-4) and CD28 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

- Freeman, G.J., et al. 1991. Structure, expression, and T cell costimulatory activity of the murine homolog of the human B lymphocyte activation antigen B7. *J. Exp. Med.* 174: 625-631.
- Schwartz, R.H. 1992. Costimulation of T lymphocytes: the role of CD28, CTLA-4, and B7/BB1 in IL-2 production and immunotherapy. *Cell* 71: 1065-1068.

CHROMOSOMAL LOCATION

Genetic locus: CD80 (human) mapping to 3q13.33.

SOURCE

B7-1 (N-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the N-terminus of B7-1 of human origin.

PRODUCT

Each vial contains 100 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

B7-1 (N-20) is available conjugated fluorescein (sc-1634 FITC, 200 µg/ml), for IF, IHC(P) and FCM.

Blocking peptide available for competition studies, sc-1634 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

B7-1 (N-20) is recommended for detection of B7-1 of 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 solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for B7-1 siRNA (h): sc-29773, B7-1 shRNA Plasmid (h): sc-29773-SH and B7-1 shRNA (h) Lentiviral Particles: sc-29773-V.

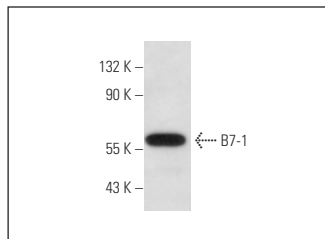
Molecular Weight of B7-1: 60 kDa.

Positive Controls: Ramos cell lysate: sc-2216 or human PBL whole cell lysate.

STORAGE

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

DATA



B7-1 (N-20): sc-1634. Western blot analysis of B7-1 expression in human PBL whole cell lysate.

SELECT PRODUCT CITATIONS

- Esser, M.T., et al. 2001. Differential incorporation of CD45, CD80 (B7-1), CD86 (B7-2), and major histocompatibility complex class I and II molecules into human immunodeficiency virus type 1 virions and microvesicles: implications for viral pathogenesis and immune regulation. *J. Virol.* 75: 6173-6182.
- Baeten, D., et al. 2002. Macrophages expressing the scavenger receptor CD163: a link between immune alterations of the gut and synovial inflammation in spondyloarthritis. *J. Pathol.* 196: 343-350.
- Liu, J., et al. 2007. Plasma cells from multiple myeloma patients express B7-H1 (PD-L1) and increase expression after stimulation with IFN-γ and TLR ligands via a MyD88-, TRAF6-, and MEK-dependent pathway. *Blood* 110: 296-304.
- Park, H.S., et al. 2007. Antioxidant flavone glycosides from the leaves of *Sasa borealis*. *Arch. Pharm. Res.* 30: 161-166.
- Scazzocchio, B., et al. 2009. Oxidized LDL impair adipocyte response to Insulin by activating serine/threonine kinases. *J. Lipid Res.* 50: 832-845.
- McNally, A.K. and Anderson, J.M. 2011. Foreign body-type multinucleated giant cells induced by interleukin-4 express select lymphocyte co-stimulatory molecules and are phenotypically distinct from osteoclasts and dendritic cells. *Exp. Mol. Pathol.* 91: 673-681.

RESEARCH USE

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



Try **B7-1 (F-7): sc-376012** or **B7-1 (2D10): sc-73382**, our highly recommended monoclonal alternatives to B7-1 (N-20).