

## B7-2 (N-18): sc-1636

### 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. SLAMF7 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 homologue 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 interleukin-2 production and immunotherapy. *Cell* 71: 1065-1068.

### CHROMOSOMAL LOCATION

Genetic locus: CD86 (human) mapping to 3q13.33.

### SOURCE

B7-2 (N-18) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the N-terminus of B7-2 of human origin.

### PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-1636 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

### APPLICATIONS

B7-2 (N-18) is recommended for detection of B7-2 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 B7-2 siRNA (h): sc-29774, B7-2 shRNA Plasmid (h): sc-29774-SH and B7-2 shRNA (h) Lentiviral Particles: sc-29774-V.

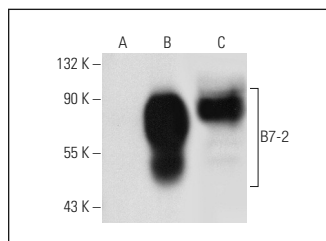
Molecular Weight of B7-2: 70 kDa.

Positive Controls: B7-2 (h): 293T Lysate: sc-114494, Raji whole cell lysate: sc-364236 or Jurkat whole cell lysate: sc-2204.

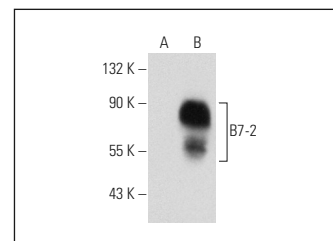
### RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

### DATA



B7-2 (N-18): sc-1636. Western blot analysis of B7-2 expression in non-transfected 293T: sc-117752 (A), human B7-2 transfected 293T: sc-114494 (B) and Raji (C) whole cell lysates.



B7-2 (N-18): sc-1636. Western blot analysis of B7-2 expression in non-transfected: sc-117752 (A) and human B7-2 transfected: sc-175289 (B) 293T whole cell lysates.

### SELECT PRODUCT CITATIONS

- Yu, W.M., et al. 2006. Effects of a leukemia-associated gain-of-function mutation of SHP-2 phosphatase on interleukin-3 signaling. *J. Biol. Chem.* 281: 5426-5434.
- Wang, L., et al. 2008. TNFα induces two distinct caspase-8 activation pathways. *Cell* 133: 693-703.

### 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.

### PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) or our catalog for detailed protocols and support products.



Try **B7-2 (D-6): sc-28347** or **B7-2 (BU63): sc-19617**, our highly recommended monoclonal alternatives to B7-2 (N-18). Also, for AC, HRP, FITC, PE, Alexa Fluor® 488 and Alexa Fluor® 647 conjugates, see **B7-2 (D-6): sc-28347**.