SANTA CRUZ BIOTECHNOLOGY, INC.

# B7-1 (H-208): sc-9091

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 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


1. 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.
2. 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; Cd80 (mouse) mapping to 16 B4.

## SOURCE

B7-1 (H-208) is a rabbit polyclonal antibody raised against amino acids 35-242 of B7-1 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.

## APPLICATIONS

B7-1 (H-208) is recommended for detection of B7-1 of human and, to a lesser extent, mouse and rat 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), 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 B7-1 siRNA (h): sc-29773, B7-1 siRNA (m): sc-37204, B7-1 shRNA Plasmid (h): sc-29773-SH, B7-1 shRNA Plasmid (m): sc-37204-SH, B7-1 shRNA (h) Lentiviral Particles: sc-29773-V and B7-1 shRNA (m) Lentiviral Particles: sc-37204-V.

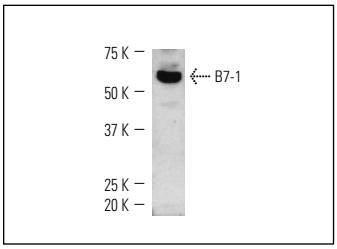
Molecular Weight of B7-1: 60 kDa.

Positive Controls: Ramos cell lysate: sc-2216.

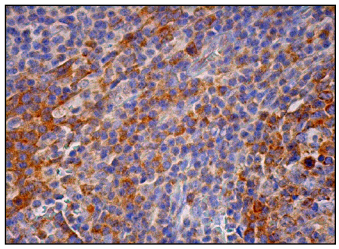
## RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (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 goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941. 4) Immunohistochemistry: use ImmunoCruz™: sc-2051 or ABC: sc-2018 rabbit IgG Staining Systems.

## DATA




B7-1 (H-208): sc-9091. Western blot analysis of B7-1 expression in Ramos whole cell lysate.



B7-1 (H-208): sc-9091. Immunoperoxidase staining of formalin fixed, paraffin-embedded human tonsil tissue showing cytoplasmic and membrane staining of cells in germinal centers and cells in non-germinal centers.

## SELECT PRODUCT CITATIONS


1. Lahat, N., et al. 2003. Hypoxia reduces CD80 expression on monocytes but enhances their LPS-stimulated TNFα secretion. J. Leukoc. Biol. 74: 197-205.
2. Chopy, D., et al. 2011. Ambivalent role of the innate immune response in rabies virus pathogenesis. J. Virol. 85: 6657-6668.


## 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.