SANTA CRUZ BIOTECHNOLOGY, INC.

B7-1 (3H5): sc-58911

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

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6. Cocks, B.G., Chang, C.C., Carballido, J.M., Yssel, H., de Vries, J.E. and Aversa, G. 1995. A novel receptor involved in T cell activation. Nature 376: 260-263.
7. Harlan, D.M., Abe, R., Lee, K.P. and June, C.H. 1995. Potential roles of the B7 and CD28 receptor families in autoimmunity and immune evasion. Clin. Immunol. Immunopathol. 75: 99-111.

CHROMOSOMAL LOCATION

Genetic locus: Cd80 (mouse) mapping to 16 B4.

SOURCE

B7-1 (3H5) is a mouse monoclonal antibody raised against HTLV-1 transformed Lewis-S1 rat cells.

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.

APPLICATIONS

B7-1 (3H5) is recommended for detection of B7-1 of mouse and rat origin by immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)] and flow cytometry (1 µg per 1 x 10^6 cells).

Suitable for use as control antibody for B7-1 siRNA (m): sc-37204, B7-1 shRNA Plasmid (m): sc-37204-SH and B7-1 shRNA (m) Lentiviral Particles: sc-37204-V.

Molecular Weight of B7-1: 60 kDa.

RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml).

SELECT PRODUCT CITATIONS

1. Xue, J., Ge, H., Lin, Z., Wang, H., Lin, W., Liu, Y., Wu, G., Xia, J. and Zhao, Q. 2019. The role of dendritic cells regulated by HMGB1/TLR4 signalling pathway in myocardial ischaemia reperfusion injury. J. Cell. Mol. Med. 23: 2849-2862.

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 for detailed protocols and support products.