

B7RP-1 (GM-13C1): sc-59263

BACKGROUND

T cell costimulatory molecule, inducible co-stimulator (ICOS)/B7-related protein-1 (B7RP-1, B7-H2, GL50, ICOS-L) is a ligand for the ICOS receptor that initiates T and B cell proliferation and cytokine secretion. B7RP-1 interactions play an essential role in T cell-dependent B cell activation in peripheral lymphoid organs such as spleen and lymph nodes. B7RP-1 protein is present in myeloid leukocytes, and by Northern blot there are 2.4, 3.0, and 7.0 kb transcripts in brain, heart, kidney and liver, with lower expression in colon and thymus, and a 1.1 kb transcript in leukocytes. Tumor necrosis factor alpha (TNF α), granulocyte-macrophage colony-stimulating factor (GM-CSF) and interleukin-4 (IL-4) enhance B7RP-1 expression. LPS-induced upregulation of B7RP-1 is dependent on the MyD88-dependent signaling pathway.

REFERENCES

1. Yoshinaga, S.K., et al. 1999. T cell costimulation through B7RP-1 and ICOS. *Nature* 402: 827-832.
2. Ling, V., et al. 2000. Cutting edge: identification of GL50, a novel B7-like protein that functionally binds to ICOS receptor. *J. Immunol.* 164: 1653-7.
3. Yoshinaga, S.K., et al. 2000. Characterization of a new human B7-related protein: B7RP-1 is the ligand to the costimulatory protein ICOS. *Int. Immunol.* 12: 1439-47.
4. Liyama, R., et al. 2003. The role of inducible costimulator (ICOS)/B7-related protein-1 (B7RP-1) interaction in the functional development of Peyer's patches. *Immunol. Lett.* 88: 63-70.
5. Wahl, P., et al. 2003. Interaction of B7RP-1 with ICOS negatively regulates antigen presentation by B cells. *Inflammation* 27: 191-200.
6. Gajewska, B.U., et al. 2005. B7RP-1 is not required for the generation of Th2 responses in a model of allergic airway inflammation but is essential for the induction of inhalation tolerance. *J. Immunol.* 174: 3000-3005.
7. Zhou, Z., et al. 2005. Antagonism between MyD88- and TRIF-dependent signals in B7RP-1 up-regulation. *Eur. J. Immunol.* 35: 1918-1927.

CHROMOSOMAL LOCATION

Genetic locus: ICOSLG (human) mapping to 21q22.3; Icoslg (mouse) mapping to 10 C1.

SOURCE

B7RP-1 (GM-13C1) is a mouse monoclonal antibody raised against the extracellular domain of B7RP-1 of human origin.

PRODUCT

Each vial contains 200 μ g IgG₁ in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Available as phycoerythrin (sc-59263 PE) or fluorescein (sc-59263 FITC) conjugates for flow cytometry, 100 tests.

RESEARCH USE

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

APPLICATIONS

B7RP-1 (GM-13C1) is recommended for detection of extracellular domain of B7RP-1 of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1–2 μ g per 100–500 μ g of total protein (1 ml of cell lysate)] and flow cytometry (1 μ g per 1 x 10⁶ cells).

Suitable for use as control antibody for B7RP-1 siRNA (h): sc-42768.

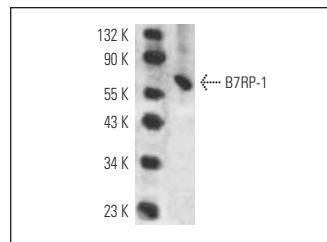
Molecular Weight of B7RP-1: 36 kDa.

Positive Controls: Daudi cell lysate: sc-2415 or human PBL.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-mouse IgG-HRP: sc-2005 (dilution range: 1:2000-1:32,000) or Cruz Marker™ compatible goat anti-mouse IgG-HRP: sc-2031 (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).

DATA



B7RP-1 (GM-13C1): sc-59263. Western blot analysis of B7RP-1 expression in human PBL whole cell lysate.

SELECT PRODUCT CITATIONS

1. Chattopadhyay, K., et al. 2006. Structural basis of inducible costimulator ligand costimulatory function: determination of the cell surface oligomeric state and functional mapping of the receptor binding site of the protein. *J. Immunol.* 177: 3920-3929.

STORAGE

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

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.