SANTA CRUZ BIOTECHNOLOGY, INC.

Pirb (A-20): sc-9608

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Leukocyte immunoglobulin-like receptors (LIRs) are members of the immunoglobulin superfamily of glycoproteins and are predominantly expressed by monocytes, B cells, dendritic cells, natural killer (NK) cells, peripheral blood leukocytes and tissues such as placenta, lung and liver. These receptors all contain a cytoplasmic immunoreceptor tyrosine-based inhibitory motif (ITIM), have an inhibitory function and are type I membrane proteins. When they bind to MHC (or other ligands) and ITIM is tyrosine phosphorylated, protein-tyrosine phosphatases are recruited and an inhibitory signal cascade triggered. Lilrb3 (leukocyte immunoglobulin-like receptor, subfamily B (with TM and ITIM domains), member 3), also known as Pirb, is an 841 amino acid mouse protein that belongs to the LIR family of immunoglobulin glycoproteins.

REFERENCES

1. Colonna, M., et al. M. 1997. A common inhibitory receptor for major histocompatibility complex class I molecules on human lymphoid and myelomonocytic cells. J. Exp. Med. 186: 1809-1818.
2. Wende, H., et al. 2000. Extensive gene duplications and a large inversion characterize the human leukocyte receptor cluster. Immunogenetics 51: 703-713.
3. Online Mendelian Inheritance in Man, OMIM™. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 604820. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/
4. Tedla, N., et al. 2003. Activation of human eosinophils through leukocyte immunoglobulin-like receptor 7. Proc. Natl. Acad. Sci. USA 100: 1174-1179.
5. Sloane, D.E., et al. 2004. Leukocyte immunoglobulin-like receptors: novel innate receptors for human basophil activation and inhibition. Blood 104: 2832-2839.
6. Huynh, O.A., et al. 2007. Downregulation of leucocyte immunoglobulin-like receptor expression in the synovium of rheumatoid arthritis patients after treatment with disease-modifying anti-rheumatic drugs. Rheumatology 46: 742-751.

CHROMOSOMAL LOCATION

Genetic locus: Pirb (mouse) mapping to 7 A1.

SOURCE

Pirb (A-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of Pirb of mouse 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-9608 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

STORAGE

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

APPLICATIONS

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

Suitable for use as control antibody for Pirb siRNA (m): sc-42952, Pirb shRNA Plasmid (m): sc-42952-SH and Pirb shRNA (m) Lentiviral Particles: sc-42952-V.

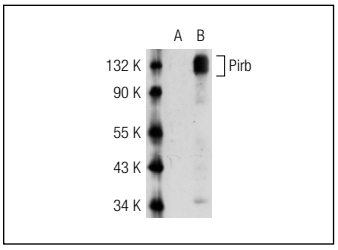
Molecular Weight of Pirb: 105 kDa.

Positive Controls: MM-142 cell lysate: sc-2246 or Lilrb3 (m): 293T lysate: sc-127286.

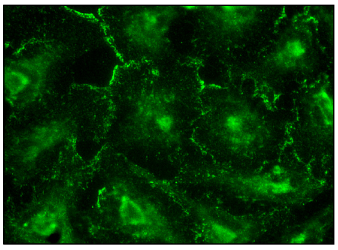
RECOMMENDED SECONDARY REAGENTS

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



Pirb (A-20): sc-9608. Western blot analysis of Pirb expression in non-transfected: sc-117752 (**A**) and mouse Pirb transfected: sc-127286 (**B**) 293T whole cell lysates.



Pirb (A-20): sc-9608. Immunofluorescence staining of methanol-fixed HeLa cells showing membrane localization.

SELECT PRODUCT CITATIONS

1. Ujike, A., et al. 2002. Impaired dendritic cell maturation and increased T(H)2 responses in PIR-B$^{-/-}$ mice. Nat. Immunol. 3: 542-548.
2. Fujita, Y., et al. 2011. The p75 receptor mediates axon growth inhibition through an association with PIR-B. Cell Death Dis. 2: e198.

RESEARCH USE

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