SANTA CRUZ BIOTECHNOLOGY, INC.

Pim-1 (G-11): sc-374116

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Pim-1 is a serine/threonine kinase that cooperates with c-Myc in lymphoid cell transformation. The expression of Pim-1 increases during the progression from early to late G_1, remaining high at the G_1/S boundary and G_2 phases of the cell cycle. Pim-1 is regulated at both the transcriptional and translational level, and it has been shown to be induced by IL-2 stimulation. Pim-1 also plays a role in T cell differentiation, and it has been shown to stimulate c-Myc-mediated apoptosis upstream of caspase-3-like proteases.

CHROMOSOMAL LOCATION

Genetic locus: PIM1 (human) mapping to 6p21.2; Pim1 (mouse) mapping to 17 A3.3.

SOURCE

Pim-1 (G-11) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 90-115 at the N-terminus of Pim-1 of human origin.

PRODUCT

Each vial contains 200 µg IgG_{2a} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Pim-1 (G-11) is available conjugated to agarose (sc-374116 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-374116 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-374116 PE), fluorescein (sc-374116 FITC), Alexa Fluor® 488 (sc-374116 AF488), Alexa Fluor® 546 (sc-374116 AF546), Alexa Fluor® 594 (sc-374116 AF594) or Alexa Fluor® 647 (sc-374116 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-374116 AF680) or Alexa Fluor® 790 (sc-374116 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-374116 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

APPLICATIONS

Pim-1 (G-11) is recommended for detection of Pim-1 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, 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). Pim-1 (G-11) is also recommended for detection of Pim-1 in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for Pim-1 siRNA (h): sc-36225, Pim-1 siRNA (m): sc-36226, Pim-1 siRNA (r): sc-270539, Pim-1 shRNA Plasmid (h): sc-36225-SH, Pim-1 shRNA Plasmid (m): sc-36226-SH, Pim-1 shRNA Plasmid (r): sc-270539-SH, Pim-1 shRNA (h) Lentiviral Particles: sc-36225-V, Pim-1 shRNA (m) Lentiviral Particles: sc-36226-V and Pim-1 shRNA (r) Lentiviral Particles: sc-270539-V.

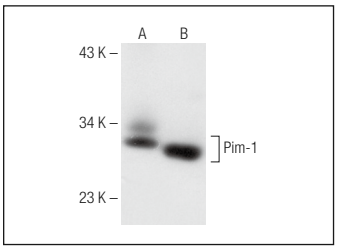
Molecular Weight of Pim-1: 33 kDa.

Positive Controls: K-562 whole cell lysate: sc-2203, mouse spleen extract: sc-2391 or PC-3 cell lysate: sc-2220.

RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 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 m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

DATA



Pim-1 (G-11): sc-374116. Western blot analysis of Pim-1 expression in mouse spleen tissue extract (**A**) and K-562 whole cell lysate (**B**).

SELECT PRODUCT CITATIONS

1. Wang, L., et al. 2015. MicroRNA-101 inhibits proliferation of pulmonary microvascular endothelial cells in a rat model of hepatopulmonary syndrome by targeting the JAK2/Stat3 signaling pathway. Mol. Med. Rep. 12: 8261-8267.
2. Tipton, A.R., et al. 2016. Guanylate-binding protein-1 protects ovarian cancer cell lines but not breast cancer cell lines from killing by paclitaxel. Biochem. Biophys. Res. Commun. 478: 1617-1623.
3. Yadav, A.K., et al. 2019. AZD1208, a pan-Pim kinase inhibitor, has anti-growth effect on 93T449 human liposarcoma cells via control of the expression and phosphorylation of Pim-3, mTOR, 4EBP-1, S6, STAT-3 and AMPK. Int. J. Mol. Sci. 20: 363.
4. Liu, H., et al. 2020. Inhibition of Pim-1 attenuates the stem cell-like traits of breast cancer cells by promoting RUNX3 nuclear retention. J. Cell. Mol. Med. 24: 6308-6323.

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.

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