

Pim-1 (12H8): sc-13513

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 G₁, remaining high at the G₁/S boundary and G₂ 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 (12H8) is a mouse monoclonal antibody raised against full length of Pim-1 of mouse origin.

PRODUCT

Each vial contains 200 µg IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Pim-1 (12H8) is available conjugated to either Alexa Fluor[®] 546 (sc-13513 AF546) or Alexa Fluor[®] 594 (sc-13513 AF594), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor[®] 680 (sc-13513 AF680) or Alexa Fluor[®] 790 (sc-13513 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

Pim-1 (12H8) is recommended for detection of Pim-1 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000) and immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)].

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

Molecular Weight of Pim-1: 33 kDa.

Positive Controls: M1 whole cell lysate: sc-364782, Raji whole cell lysate: sc-364236 or MEG-01 cell lysate: sc-2283.

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).

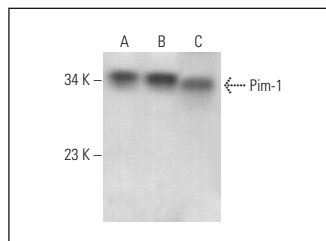
RESEARCH USE

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

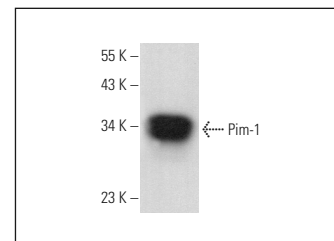
STORAGE

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

DATA



Pim-1 (12H8): sc-13513. Western blot analysis of Pim-1 expression in HUV-EC-C (A), Raji (B) and M1 (C) whole cell lysates.



Pim-1 (12H8): sc-13513. Western blot analysis of Pim-1 expression in MEG-01 whole cell lysate.

SELECT PRODUCT CITATIONS

- Edinger, A., et al. 2003. Rab7 prevents growth factor-independent survival by inhibiting cell-autonomous nutrient transporter expression. *Development* 5: 571-582.
- Guo, G., et al. 2010. Oncogenic E17K mutation in the pleckstrin homology domain of AKT1 promotes v-Abl-mediated pre-B-cell transformation and survival of Pim-deficient cells. *Oncogene* 29: 3845-3853.
- Morishita, D., et al. 2011. Cell-permeable carboxyl-terminal p27 Kip1 peptide exhibits anti-tumor activity by inhibiting Pim-1 kinase. *J. Biol. Chem.* 286: 2681-2688.
- Kim, K.T., et al. 2012. MicroRNA-16 is down-regulated in mutated FLT3 expressing murine myeloid FDC-P1 cells and interacts with Pim-1. *PLoS ONE* 7: e44546.
- Ha, S., et al. 2013. Phosphorylation of the androgen receptor by Pim-1 in hormone refractory prostate cancer. *Oncogene*. 32: 3992-4000.
- van der Meer, R., et al. 2014. RNAi screen identifies a synthetic lethal interaction between PIM1 overexpression and PLK1 inhibition. *Clin. Cancer Res.* 20: 3211-3221.
- Kirschner, A.N., et al. 2015. PIM kinase inhibitor AZD1208 for treatment of MYC-driven prostate cancer. *J. Natl. Cancer Inst.* 107: dju407.
- Jinesh, G.G., et al. 2016. Smac mimetic with TNF-α targets Pim-1 isoforms and reactive oxygen species production to abrogate transformation from blebbishields. *Biochem. J.* 473: 99-107.
- Knudson, KM., et al. 2017. NFκB-Pim-1-Eomesodermin axis is critical for maintaining CD8 T-cell memory quality. *Proc. Natl. Acad. Sci. USA* 114: E1659-E1667.

PROTOCOLS

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

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