

Pim-2 (F-4): sc-271893

BACKGROUND

The Pim-2 gene product (provirus integration site for Moloney murine leukemia virus), is a serine/threonine kinase that is capable of autophosphorylation. Human transcripts for Pim-2 have been detected in hematopoietic lineages as well as leukemic and lymphomic cells (K-562, HL-60, RAJI, SW480, testis, small intestine and colon). Additionally, Pim-2 kinase is found at moderate levels and is distributed evenly throughout the brain. Pim-2 kinase is implicated in tumor phenotypes and may be involved in the formation and preservation of Long-Term Potentiation (LTP), a profuse, activity-dependent enhancement of synaptic efficacy that is implicated in long-term memory.

REFERENCES

1. Van der Lugt, N.M., et al. 1995. Proviral tagging in Eμ-Myc transgenic mice lacking the Pim-1 proto-oncogene leads to compensatory activation of Pim-2. *EMBO J.* 14: 2536-2544.
2. Allen, J.D., et al. 1997. Pim-2 transgene induces lymphoid tumors, exhibiting potent synergy with c-Myc. *Oncogene* 15: 1133-1141.
3. Baytel, D., et al. 1998. The human Pim-2 proto-oncogene and its testicular expression. *Biochim. Biophys. Acta* 1442: 274-285.
4. Konietzko, U., et al. 1999. Pim kinase expression is induced by LTP stimulation and required for the consolidation of enduring LTP. *EMBO J.* 18: 3359-3369.
5. Eichmann, A., et al. 2000. Developmental expression of Pim kinases suggests functions also outside of the hematopoietic system. *Oncogene* 19: 1215-1224.
6. Hammerman, P.S., et al. 2004. Lymphocyte transformation by Pim-2 is dependent on nuclear factor-κB activation. *Cancer Res.* 64: 8341-8348.
7. Dai, J.M., et al. 2005. Antisense oligodeoxynucleotides targeting the serine/threonine kinase Pim-2 inhibited proliferation of DU 145 cells. *Acta Pharmacol. Sin.* 26: 364-368.

CHROMOSOMAL LOCATION

Genetic locus: PIM2 (human) mapping to Xp11.23.

SOURCE

Pim-2 (F-4) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 283-310 at the C-terminus of Pim-2 of human 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.

Blocking peptide available for competition studies, sc-271893 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

STORAGE

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

APPLICATIONS

Pim-2 (F-4) is recommended for detection of Pim-2 of 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).

Suitable for use as control antibody for Pim-2 siRNA (h): sc-39145, Pim-2 shRNA Plasmid (h): sc-39145-SH and Pim-2 shRNA (h) Lentiviral Particles: sc-39145-V.

Molecular Weight of Pim-2 human short isoform: 34 kDa.

Molecular Weight of Pim-2 mouse short/long isoform: 34/40 kDa.

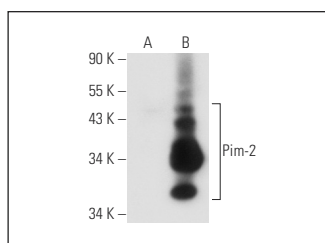
Molecular Weight of Pim-2 mouse med isoform: 38 kDa.

Positive Controls: Pim-2 (h4): 293T Lysate: sc-111264.

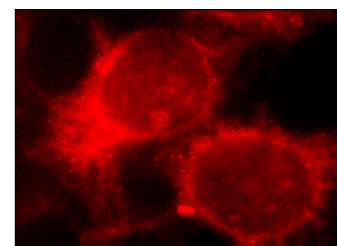
RECOMMENDED SUPPORT REAGENTS

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-2 (F-4): sc-271893. Western blot analysis of Pim-2 expression in non-transfected: sc-117752 (A) and human Pim-2 transfected: sc-111264 (B) 293T whole cell lysates.



Pim-2 (F-4): sc-271893. Immunofluorescence staining of methanol-fixed HeLa cells showing cytoplasmic localization.

RESEARCH USE

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



See **Pim-2 (1D12): sc-13514** for Pim-2 antibody conjugates, including AC, HRP, FITC, PE, and Alexa Fluor® 488, 546, 594, 647, 680 and 790.