

p-HePTP (Ser 93): sc-130193

BACKGROUND

Hematopoietic protein tyrosine phosphatase (HePTP) belongs to a subgroup of PTPases with two other members, STEP and PCPTP1, all of which consist of a single C-terminal PTPase domain that is preceded by a noncatalytic N-terminal domain. Unlike STEP and PCPTP1, which are expressed primarily in the central nervous system, HePTP is expressed in thymus, spleen and in leukemic cell lines, including Jurkat T leukemia cells. The gene encoding HePTP was originally cloned from human T lymphocytes, and it maps to chromosome 1q32.1, a site frequently mutated in preleukemic myeloproliferative disease. The locus of the gene suggests a role for HePTP in cell proliferation and differentiation. The HePTP gene is transcriptionally activated in T cells treated with Interleukin 6. HePTP mRNA levels increase several-fold in normal mouse lymphocytes upon stimulation with phytohemagglutinin, lipopolysaccharide, concanavalin A and anti-CD3. Overexpression of HePTP reduces T cell receptor (TCR)-induced activation of ERK 2, and interferes with PMA and growth factor-induced MAPK activation in myeloid cells. In resting T cells, HePTP may be phosphorylated on serine residues, such as Ser 93 in human HePTP.

REFERENCES

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2. Zanke, B., et al. 1994. A hematopoietic protein tyrosine phosphatase (HePTP) gene that is amplified and overexpressed in myeloid malignancies maps to chromosome 1q32.1. *Leukemia* 8: 236-244.
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4. Saxena, M., et al. 1998. Negative regulation of T cell antigen receptor signal transduction by hematopoietic tyrosine phosphatase (HePTP). *J. Biol. Chem.* 273: 15340-15344.
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CHROMOSOMAL LOCATION

Genetic locus: PTPN7 (human) mapping to 1q32.1.

RESEARCH USE

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

SOURCE

p-HePTP (Ser 93) is a rabbit polyclonal antibody raised against a short amino acid sequence containing Ser 93 phosphorylated HePTP of human origin.

PRODUCT

Each vial contains 100 µg IgG in 1.0 ml PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

p-HePTP (Ser 93) is recommended for detection of Ser 93 phosphorylated HePTP of human 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)] and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for HePTP siRNA (h): sc-43830, HePTP shRNA Plasmid (h): sc-43830-SH and HePTP shRNA (h) Lentiviral Particles: sc-43830-V.

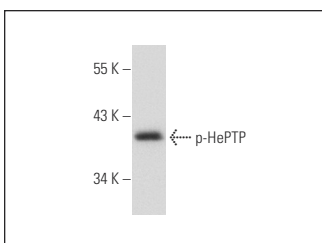
Molecular Weight of p-HePTP: 38 kDa.

Positive Controls: Jurkat whole cell lysate: sc-2204.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto B Blocking Reagent: sc-2335 (use 50 mM NaF, sc-24988, as diluent), Western Blotting Luminol Reagent: sc-2048 and Lambda Phosphatase: sc-200312A. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml).

DATA



p-HePTP (Ser 93): sc-130193. Western blot analysis of HePTP phosphorylation in Jurkat whole cell lysate.

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.