SANTA CRUZ BIOTECHNOLOGY, INC.

HePTP (H-80): sc-21008

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.

CHROMOSOMAL LOCATION

Genetic locus: PTPN7 (human) mapping to 1q32.1; Ptpn7 (mouse) mapping to 1 E4.

SOURCE

HePTP (H-80) is a rabbit polyclonal antibody raised against amino acids 46-125 mapping near the N-terminus of HePTP of human origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

RESEARCH USE

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

APPLICATIONS

HePTP (H-80) is recommended for detection of HePTP of mouse, rat and 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)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

HePTP (H-80) is also recommended for detection of HePTP in additional species, including equine, canine and bovine.

Suitable for use as control antibody for HePTP siRNA (h): sc-43830, HePTP siRNA (m): sc-45923, HePTP shRNA Plasmid (h): sc-43830-SH, HePTP shRNA Plasmid (m): sc-45923-SH, HePTP shRNA (h) Lentiviral Particles: sc-43830-V and HePTP shRNA (m) Lentiviral Particles: sc-45923-V.

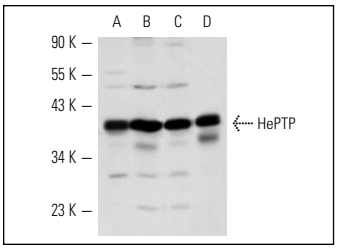
Molecular Weight of HePTP: 38 kDa.

Positive Controls: Jurkat + IL-2 cell lysate: sc-2278, Jurkat whole cell lysate: sc-2204 or Ramos cell lysate: sc-2216.

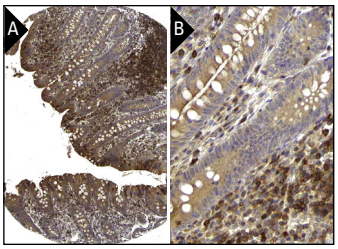
RECOMMENDED SECONDARY REAGENTS

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 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 goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941. 4) Immunohistochemistry: use ImmunoCruz™: sc-2051 or ABC: sc-2018 rabbit IgG Staining Systems.

DAT



HePTP (H-80): sc-21008. Western blot analysis of HePTP expression in Jurkat (**A**), Jurkat + IL-2 (**B**) and Ramos (**C**) whole cell lysates and mouse thymus (**D**) tissue extract.



HePTP (H-80): sc-21008. Immunoperoxidase staining of formalin fixed, paraffin-embedded human appendix tissue showing cytoplasmic staining of glandular and lymphoid cells at low (**A**) and high (**B**) magnification. Kindly provided by The Swedish Human Protein Atlas (HPA) program.

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.

MONOS Satisfaction Guaranteed

Try **HePTP (E-5): sc-271245**, our highly recommended monoclonal alternative to HePTP (H-80).