BACKGROUND

Protein tyrosine phosphatases (PTPs) and protein tyrosine kinases (PTKs) play an ubiquitous role in the regulation of tyrosine phosphorylation-mediated signaling pathways. Tyrosine-phosphorylated proteins can be dephosphorylated through the action of PTPs, which are likely to play a regulatory role in the control of cellular growth and differentiation. The gene encoding human PTP-PEST maps to chromosome 7q11.23 and encodes a 780 amino acid cytosolic nonreceptor protein. PTP-PEST is expressed abundantly in a wide variety of hemopoietic cell types, including B cells and T cells. PTP-PEST may constitutively associate with several signaling molecules, including Shc, paxillin, Csk and Cas, and inactivate the Ras pathway. Dephosphorylation of c-Abl by PTP-PEST represents a novel mechanism by which c-Abl activity is regulated. PTP-PEST can also influence cytoskeletal organization and promote the turnover of focal adhesions required for cell migration, and through regulation of the proline, serine, threonine phosphatase interacting protein (PSTPIP)‐mediated cleavage furrow formation or disassembly during normal cell division.

REFERENCES


APPLICATIONS

PTP-PEST (H-11) is recommended for detection of PTP-PEST 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).

RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended:
1) Western Blotting: use m-IgG HRP: sc-516102 or m-IgG 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 Lumino Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgG HRP-FLITC: sc-516140 or m-IgG HRP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-358850.

CHROMOSOMAL LOCATION

Genetic locus: PTPN12 (human) mapping to 7q11.23; Ptpn12 (mouse) mapping to chromosome 7q11.23.

SOURCE

PTP-PEST (H-11) is a mouse monoclonal antibody raised against amino acids 296-425 mapping within an internal region of PTP-PEST of human origin.

PRODUCT

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

PTP-PEST (H-11) is available conjugated to agarose (sc-271351 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-271351 HRP), 200 µg/ml, for WB, HRP and ELISA; to either phycoerythin (sc-271351 PE), fluorescein (sc-271351 FITC), Alexa Fluor® 488 (sc-271351 AF488), Alexa Fluor® 546 (sc-271351 AF546), Alexa Fluor® 594 (sc-271351 AF594) or Alexa Fluor® 647 (sc-271351 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FC; and to either Alexa Fluor® 680 (sc-271351 AF680) or Alexa Fluor® 790 (sc-271351 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FC.

DATA

PTP-PEST (H-11): sc-271351. Western blot analysis of PTP-PEST expression in Hep G2 (A) and MCF7 (B) whole cell lysates.

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.