SANTA CRUZ BIOTECHNOLOGY, INC.

PTP-PEST (F-12): sc-398775

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Protein tyrosine phosphorylation plays a key role in the regulation of several fundamental cellular processes, including cell growth, migration and differentiation. The regulation of phosphorylation is controlled by the opposing actions of protein tyrosine kinases and protein tyrosine phosphatase. BDP1 (brain derived phosphatase 1) is a member of the PEST protein tyrosine phosphatase family. The expression of BDP1 is not limited to the brain, but is also detectable in colon and several tumor-derived cell lines. BDP1 has been shown to differentially dephosphorylate autophosphorylated tyrosine kinases, such as Src and EGFR, that are overexpressed in tumor tissues.

REFERENCES

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2. Walton, K.M. and Dixon, J.E. 1993. Protein tyrosine phosphatases. Annu. Rev. Biochem. 62: 101-120.
3. Kim, Y.W., Wang, H., Sures, I., Lammers, R., Martell, K.J. and Ullrich, A. 1996. Characterization of the PEST family protein tyrosine phosphatase BDP1. Oncogene 13: 2275-2279.
4. Tamir, I. and Cambier, J.C. 1998. Antigen receptor signaling: integration of protein tyrosine kinase functions. Oncogene 17: 1353-1364.
5. Van Vactor, D., O'Reilly, A.M. and Neel, B.G. 1998. Genetic analysis of protein tyrosine phosphatases. Curr. Opin. Genet. Dev. 8: 112-126.

CHROMOSOMAL LOCATION

Genetic locus: PTPN12 (human) mapping to 7q11.23; Ptpn12 (mouse) mapping to 5 A3.

SOURCE

PTP-PEST (F-12) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 747-775 near the C-terminus of PTP-PEST of mouse origin.

PRODUCT

Each vial contains 200 µg IgG_3 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-398775 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.

PROTOCOLS

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

APPLICATIONS

PTP-PEST (F-12) is recommended for detection of PTP-TEST 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).

Suitable for use as control antibody for PTP-PEST siRNA (h): sc-39207, PTP-PEST siRNA (m): sc-39208, PTP-PEST shRNA Plasmid (h): sc-39207-SH, PTP-PEST shRNA Plasmid (m): sc-39208-SH, PTP-PEST shRNA (h) Lentiviral Particles: sc-39207-V and PTP-PEST shRNA (m) Lentiviral Particles: sc-39208-V.

Molecular Weight of mouse PTP-PEST: 120 kDa.

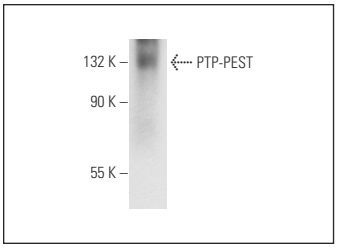
Molecular Weight of human PTP-PEST: 100 kDa.

Positive Controls: P19 cell lysate: sc-24760.

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



PTP-PEST (F-12): sc-398775. Western blot analysis of PTP-PEST expression in P19 whole cell lysate.

RESEARCH USE

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