SANTA CRUZ BIOTECHNOLOGY, INC.

Pez (H-67): sc-68384

BACKGROUND

Pez (protein tyrosine phosphatase Pez), also known as PTP36 or tyrosine-protein phosphatase non-receptor type 14 (PTPN14), is a member of the non-receptor class subfamily of the protein tyrosine phosphatase family. Protein tyrosine phosphatases (PTPs) are involved in the regulation of a variety of cellular processes. Pez is a cytosolic protein (concentrated at the intercellular junctions) that is expressed in various tissues including placenta, lung, kidney and skeletal muscle. It contains one protein tyrosine phosphatase domain and one FERM (4.1, ezrin, radixin, moesin) domain. In actively proliferating cells, where cell-cell contacts have been disrupted, Pez translocates to the nucleus. TGFβ, a protein known to inhibit cell proliferation, can inhibit the nuclear translocation of Pez. Localization of Pez is also regulated by serum concentrations; higher serum concentrations can lead to the accumulation of Pez in the nucleus. This strongly suggests a role for Pez in cell proliferation.

REFERENCES

1. Smith, A.L., et al. 1995. Pez: a novel human cDNA encoding protein tyrosine phosphatase- and ezrin-like domains. Biochem. Biophys. Res. Commun. 209: 959-965.
2. Ogata, M., et al. 1999. Effects of overexpression of PTP36, a putative protein tyrosine phosphatase, on cell adhesion, cell growth, and cytoskeletons in HeLa cells. J. Biol. Chem. 274: 12905-12909.
3. Ogata, M., et al. 1999. Regulation of phosphorylation level and distribution of PTP36, a putative protein tyrosine phosphatase, by cell-substrate adhesion. J. Biol. Chem. 274: 20717-20724.
4. Aoyama, K., et al. 1999. Characterization of newly identified four isoforms for a putative cytosolic protein tyrosine phosphatase PTP36. Biochem. Biophys. Res. Commun. 266: 523-531.
5. Wadham, C., et al. 2000. Translocation of protein tyrosine phosphatase Pez/PTPD2/PTP36 to the nucleus is associated with induction of cell proliferation. J. Cell Sci. 113: 3117-3123.

CHROMOSOMAL LOCATION

Genetic locus: PTPN14 (human) mapping to 1q41; Ptpn14 (mouse) mapping to 1 H6.

SOURCE

Pez (H-67) is a rabbit polyclonal antibody raised against amino acids 321-387 mapping within an internal region of Pez 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.

STORAGE

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

APPLICATIONS

Pez (H-67) is recommended for detection of Pez 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Pez (H-67) is also recommended for detection of Pez in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for Pez siRNA (h): sc-62777, Pez siRNA (m): sc-62778, Pez shRNA Plasmid (h): sc-62777-SH, Pez shRNA Plasmid (m): sc-62778-SH, Pez shRNA (h) Lentiviral Particles: sc-62777-V and Pez shRNA (m) Lentiviral Particles: sc-62778-V.

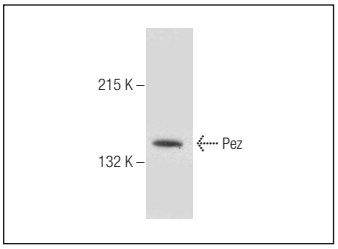
Molecular Weight of Pez: 135 kDa.

Positive Controls: K-562 whole cell lysate: sc-2203, SHP-77 whole cell lysate: sc-364258 or HUV-EC-C whole cell lysate: sc-364180.

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.

DATA



Pez (H-67): sc-68384. Western blot analysis of Pez expression in K-562 whole cell lysate.

RESEARCH USE

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

MONOS Satisfaction Guaranteed

Try **Pez (F-12): sc-373766**, our highly recommended monoclonal alternative to Pez (H-67).