SANTA CRUZ BIOTECHNOLOGY, INC.

PTPN20A/B (D-16): sc-138557

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

The protein tyrosine phosphatase (PTP) family of proteins are signaling molecules that regulate processes such as cell growth, cell differentiation, oncogenic transformation and the mitotic cycle. PTPN20A (protein tyrosine phosphatase, non-receptor type 20A) is a 420 amino acid member of the protein-tyrosine phosphatase family and the non-receptor class subfamily that localizes to both nucleus and cytoplasm. Widely expressed, PTPN20A colocalizes with the microtubule-organizing center and intracellular membrane compartments. PTPN20A targets sites of Actin polymerization in response of varied extracellular stimuli and has tyrosine phosphatase activity towards various tyrosyl phosphorylated substrates. PTPN20A contains one tyrosine-protein phosphatase domain and exists as fifteen alternatively spliced variants. The gene encoding PTPN20A is located on human chromosome 10, which houses over 1,200 genes and comprises nearly 4.5% of the human genome.

REFERENCES

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3. Korff, S., et al. 2008. Frameshift mutations in coding repeats of protein tyrosine phosphatase genes in colorectal tumors with microsatellite instability. BMC Cancer 8: 329.
4. Carlucci, A., et al. 2008. Protein-tyrosine phosphatase PTPD1 regulates focal adhesion kinase autophosphorylation and cell migration. J. Biol. Chem. 283: 10919-10929.
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6. Niu, J., et al. 2009. Genetic polymorphisms in the PTPN13 gene and risk of squamous cell carcinoma of head and neck. Carcinogenesis 30: 2053-2058.
7. Lin, I.S., et al. 2009. PTPN11 mutations in LEOPARD syndrome: report of four cases in Taiwan. J. Formos. Med. Assoc. 108: 803-807.
8. Zervou, M.I., et al. 2010. The protein tyrosine phosphatase, non-receptor type 22 R620W polymorphism does not confer susceptibility to psoriasis in the genetic homogeneous population of Crete. Genet. Test Mol. Biomarkers 14: 107-111.
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CHROMOSOMAL LOCATION

Genetic locus: PTPN20A (human) mapping to 10q11.21, PTPN20B (human) mapping to 10q11.22; Ptpn20 (mouse) mapping to 14 B.

RESEARCH USE

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

SOURCE

PTPN20A/B (D-16) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of PTPN20A 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.

Blocking peptide available for competition studies, sc-138557 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

PTPN20A/B (D-16) is recommended for detection of PTPN20A/B isoforms 1-6, 9 and 11 of human origin and PTPN20 of mouse and rat origin of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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); non cross-reactive with other PTPN20A/B isoforms.

Suitable for use as control antibody for PTPN20 siRNA (m): sc-152586, PTPN20 shRNA Plasmid (m): sc-152586-SH and PTPN20 shRNA (m) Lentiviral Particles: sc-152586-V.

Molecular Weight of PTPN20A/B: 47 kDa.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (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) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

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.