SANTA CRUZ BIOTECHNOLOGY, INC.

# PTPDC1 (Y-12): sc-137697

## BACKGROUND

Protein tyrosine phosphorylation influences cell responses including growth, proliferation, differentiation, migration, metabolism and survival. Tyrosine phosphorylation is a reversible process in balance by the activities of protein tyrosine kinases and protein tyrosine phosphatases (PTP). The PTP superfamily includes transmembrane receptor-like PTPs, cytosolic phosphotyrosine specific PTPs, Dual Specificity PTPs (DSP), and Multiple Specificity PTP (MSPs). PTPDC1 (protein tyrosine phosphatase domain containing 1), also known as PTP9Q22, is a 754 amino acid protein that belongs to the PTP family and non-receptor class PTPDC1 subfamily. Existing as two alternatively spliced isoforms, PTPDC1 is encoded by a gene that maps to human chromosome 9q22.32 and mouse chromosome 13 A5.

## REFERENCES


1. Krueger, N.X., et al. 1990. Structural diversity and evolution of human receptor-like protein tyrosine phosphatases. EMBO J. 9: 3241-3252.
2. Fischer, E.H., et al. 1991. Protein tyrosine phosphatases: a diverse family of intracellular and transmembrane enzymes. Science 253: 401-406.
3. Pan, M.-G., et al. 1993. Cloning and expression of two structurally distinct receptor-linked protein-tyrosine phosphatases generated by RNA processing from a single gene. J. Biol. Chem. 268:19284-19291.
4. Wright, M.B. et al. 1998. Proliferating and migrating mesangial cells responding to injury express a novel receptor protein-tyrosine phosphatase in experimental mesangial proliferative glomerulonephritis. J. Biol. Chem. 273: 23929-23937.
5. Goodyear, R.J., et al. 2003. A receptor-like inositol lipid phosphatase is required for the maturation of developing cochlear hair bundles. J. Neurosci. 23: 9208-9219.
6. Veeramani, S., et al. 2009. Revisiting histidine-dependent acid phosphatases: a distinct group of tyrosine phosphatases. Trends Biochem. Sci. 34: 273-278.


## CHROMOSOMAL LOCATION

Genetic locus: PTPDC1 (human) mapping to 9q22.32; Ptpdc1 (mouse) mapping to 13 A5.

## SOURCE

PTPDC1 (Y-12) is an affinity purified rabbit polyclonal antibody raised against a peptide mapping near the N-terminus of PTPDC1 of human origin.

## PRODUCT

Each vial contains 100 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-137697 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## STORAGE

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

## APPLICATIONS

PTPDC1 (Y-12) is recommended for detection of PTPDC1 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:50-1:500), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:25, dilution range 1:25-1:250) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

PTPDC1 (Y-12) is also recommended for detection of PTPDC1 in additional species, including porcine.

Suitable for use as control antibody for PTPDC1 siRNA (h): sc-92811, PTPDC1 siRNA (m): sc-152581, PTPDC1 shRNA Plasmid (h): sc-92811-SH, PTPDC1 shRNA Plasmid (m): sc-152581-SH, PTPDC1 shRNA (h) Lentiviral Particles: sc-92811-V and PTPDC1 shRNA (m) Lentiviral Particles: sc-152581-V.

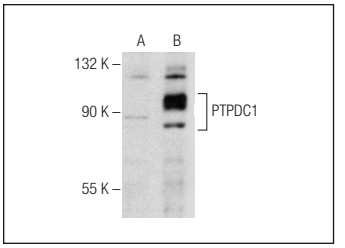
Molecular Weight of PTPDC1 isoforms: 84/90 kDa.

Positive Controls: PTPDC1 (h): 293T Lysate: sc-116927.

## 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




PTPDC1 (Y-12): sc-137697. Western blot analysis of PTPDC1 expression in non-transfected: sc-117752 (**A**) and human PTPDC1 transfected: sc-116927 (**B**) 293T whole cell lysates.

## RESEARCH USE

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

## PROTOCOLS

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