

PTP IA-2 (H-41): sc-292265

BACKGROUND

Protein tyrosine phosphatases, or PTPs, are type I transmembrane proteins, membrane-associated proteins or proteins localized in nuclei. Examples of transmembrane PTPs are LAR, PTP α , PTP β , PTP γ , PTP δ , PTP ϵ , PTP ζ , PTP κ and PTP μ . Transmembrane PTPs play diverse roles in a variety of cellular processes during development and in adult tissues. PTP IA-2 (PTP Insulinoma-associated protein 2), also known as PTPRN, IA2, ICA512 (islet cell antigen 512) or RPTPN, is a receptor-type PTP-like protein containing a transmembrane region, an intracellular PTP-like domain and an extracellular N-terminus. Localizing to secretory granules, PTP IA-2 is exclusively expressed in neuroendocrine cells (including pancreatic islet cells) and is believed to participate in the regulation of secretory granule exocytosis. PTP IA-2 is an autoantigen and contributes to Insulin-dependent diabetes mellitus (IDDM). The detection of autoantibodies against PTP IA-2 is commonly used as a diabetes diagnosis marker.

CHROMOSOMAL LOCATION

Genetic locus: PTPRN (human) mapping to 2q35; Ptpn (mouse) mapping to 1 C3.

SOURCE

PTP IA-2 (H-41) is a rabbit polyclonal antibody raised against amino acids 723-763 mapping within an internal region of PTP IA-2 of human origin.

PRODUCT

Each vial contains 200 μ g 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

PTP IA-2 (H-41) is recommended for detection of PTP IA-2 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g 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).

PTP IA-2 (H-41) is also recommended for detection of PTP IA-2 in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for PTP IA-2 siRNA (h): sc-62902, PTP IA-2 siRNA (m): sc-62903, PTP IA-2 shRNA Plasmid (h): sc-62902-SH, PTP IA-2 shRNA Plasmid (m): sc-62903-SH, PTP IA-2 shRNA (h) Lentiviral Particles: sc-62902-V and PTP IA-2 shRNA (m) Lentiviral Particles: sc-62903-V.

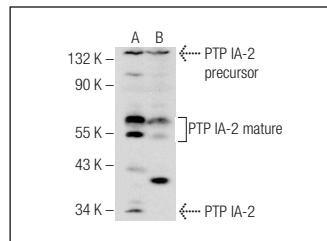
Molecular Weight of PTP IA-2 isoforms: 71/67/64/60/30 kDa.

Positive Controls: IMR-32 cell lysate: sc-2409 or MIA PaCa-2 cell lysate: sc-2285.

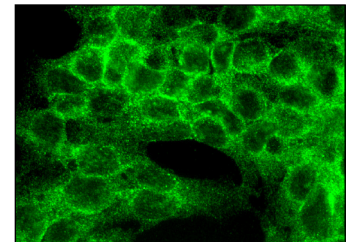
RECOMMENDED SECONDARY REAGENTS

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



PTP IA-2 (H-41): sc-292265. Western blot analysis of PTP IA-2 expression in IMR-32 (A) and MIA PaCa-2 (B) whole cell lysates.



PTP IA-2 (H-41): sc-292265. Immunofluorescence staining of formalin-fixed HepG2 cells showing membrane and cytoplasmic localization.

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.



Try **PTP IA-2 (A-5): sc-390101** or **PTP IA-2 (98/4H6): sc-130570**, our highly recommended monoclonal alternatives to PTP IA-2 (H-41).