Human IA-2/PTPRN Antibody

Monoclonal Mouse IgG_{2A} Clone # 815811

Catalog Number: MAB7906

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human IA-2/PTPRN in ELISAs.
Source	Monoclonal Mouse IgG_{2A} Clone # 815811
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	*E. coli*-derived recombinant human IA-2/PTPRN Val35-Arg575 Accession # Q16849
Formulation	Lyophilized from a 0.2 μm filtered solution in PBS with Trehalose. See Certificate of Analysis for details. *Small pack size (-SP) is supplied either lyophilized or as a 0.2 μm filtered solution in PBS.

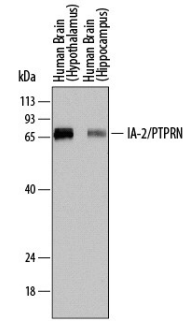
APPLICATIONS

Please Note: *Optimal dilutions should be determined by each laboratory for each application. General Protocols are available in the Technical Information section on our website.*

	Recommended Concentration	Sample
Western Blot	1 µg/mL	See Below
Immunohistochemistry	8-25 µg/mL	See Below
Simple Western	10 µg/mL	See Below

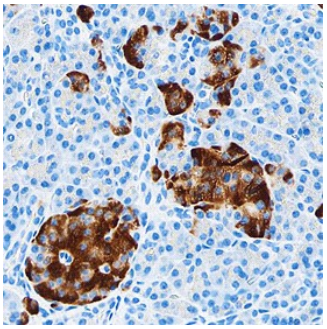
DATA

Western Blot



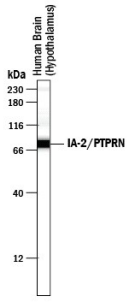
Detection of Human IA-2/PTPRN by Western Blot. Western blot shows lysates of human brain (hypothalamus) tissue and human brain (hippocampus) tissue. PVDF membrane was probed with 1 µg/mL of Mouse Anti-Human IA-2/PTPRN Monoclonal Antibody (Catalog # MAB7906) followed by HRP-conjugated Anti-Mouse IgG Secondary Antibody (Catalog # HAF018). A specific band was detected for IA-2/PTPRN at approximately 70 kDa (as indicated). This experiment was conducted under reducing conditions and using Immunoblot Buffer Group 1.

Immunohistochemistry



IA-2/PTPRN in Human Pancreas. IA-2/PTPRN was detected in immersion fixed paraffin-embedded sections of human pancreas using Mouse Anti-Human IA-2/PTPRN Monoclonal Antibody (Catalog # MAB7906) at 15 µg/mL overnight at 4 °C. Before incubation with the primary antibody, tissue was subjected to heat-induced epitope retrieval using Antigen Retrieval Reagent-Basic (Catalog # CTS013). Tissue was stained using the Anti-Mouse HRP-DAB Cell & Tissue Staining Kit (brown; Catalog # CTS002) and counterstained with hematoxylin (blue). Specific staining was localized to islets. View our protocol for Chromogenic IHC Staining of Paraffin-embedded Tissue Sections.

Simple Western



Detection of Human IA-2/PTPRN by Simple Western™. Simple Western lane view shows lysates of human brain (hypothalamus) tissue, loaded at 0.5 mg/mL. A specific band was detected for IA-2/PTPRN at approximately 78 kDa (as indicated) using 10 µg/mL of Mouse Anti-Human IA-2/PTPRN Monoclonal Antibody (Catalog # MAB7906) . This experiment was conducted under reducing conditions and using the 12-230 kDa separation system.

PREPARATION AND STORAGE

Reconstitution	Sterile PBS to a final concentration of 0.5 mg/mL.
Shipping	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below. *Small pack size (-SP) is shipped with polar packs. Upon receipt, store it immediately at -20 to -70 °C
Stability & Storage	**Use a manual defrost freezer and avoid repeated freeze-thaw cycles.** ● 12 months from date of receipt, -20 to -70 °C as supplied. ● 1 month, 2 to 8 °C under sterile conditions after reconstitution. ● 6 months, -20 to -70 °C under sterile conditions after reconstitution.

bio-techne®
Global bio-techne.com info@bio-techne.com techsupport@bio-techne.com TEL +1 612 379 2956
USA TEL 800 343 7475 Canada TEL 855 668 8722 China TEL +86 (21) 52380373
Europe | Middle East | Africa TEL +44 (0)1235 529449

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BACKGROUND

IA-2 (insulinoma-assocated protein 2), also called PTPRN (protein tyrosine phosphatase-like N) and ICA512 (islet cell antigen 512), is a 130 kDa member of the receptor tyrosine phosphatase family of type I transmembrane enzymes. It is not active as a phosphatase but acts an autoantigen in type I (insulin-dependent) diabetes. It is mainly expressed in neuroendocrine cells types within pancreatic islets, adrenal medulla, pituitary, and the central nervous system, and is present within membranes of regulated secretory granules. It is induced by glucose and insulin in the pancreas and is thought to contribute to the growth of β cells. Cleavage at a furin-like site at amino acid (aa) 448 creates a 60-66 kDa transmembrane fragment. Within the region used as an immunogen, human IA-2 shares 80% aa sequence identity with mouse and rat IA-2.

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Global bio-techne.com info@bio-techne.com techsupport@bio-techne.com TEL +1 612 379 2956
USA TEL 800 343 7475 Canada TEL 855 668 8722 China TEL +86 (21) 52380373
Europe | Middle East | Africa TEL +44 (0)1235 529449