

DESCRIPTION

Species Reactivity	Human
Specificity	Detects endogenous human PTPN14 in Western blots. In Western blots, this antibody does not cross-react with recombinant human (rh) PTPN13 or rhPTPN22.
Source	Monoclonal Mouse IgG _{2B} Clone # 448701
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	<i>E. coli</i> -derived recombinant human PTPN14 Leu329-Leu900 Accession # Q15678.2
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 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

DATA

<p>Western Blot</p> <p>Detection of Human PTPN14 by Western Blot. Western blot shows lysates of DU145 human prostate carcinoma cell line, HT-29 human colon adenocarcinoma cell line, and HT-29 human colon adenocarcinoma cell line. PVDF membrane was probed with 1 µg/mL of Human PTPN14 Monoclonal Antibody (Catalog # MAB4458) followed by HRP-conjugated Anti-Mouse IgG Secondary Antibody (Catalog # HAF007). A specific band was detected for PTPN14 at approximately 135 kDa (as indicated). This experiment was conducted under reducing conditions and using Immunoblot Buffer Group 1.</p>	<p>Immunohistochemistry</p> <p>PTPN14 in Human Placenta. PTPN14 was detected in immersion fixed paraffin-embedded sections of human placenta using Human PTPN14 Monoclonal Antibody (Catalog # MAB4458) at 25 µg/mL overnight at 4 °C. Tissue was stained using the Anti-Mouse HRP-DAB Cell & Tissue Staining Kit (brown; Catalog # CTS002) and counterstained with hematoxylin (blue). View our protocol for Chromogenic IHC Staining of Paraffin-embedded Tissue Sections.</p>
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PREPARATION AND STORAGE

Reconstitution	Reconstitute at 0.5 mg/mL in sterile PBS.
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. <ul style="list-style-type: none"> ● 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.

BACKGROUND

Protein Tyrosine Phosphatase, Non-receptor type 14 (PTPN14), also called Phosphatase with Ezrin Domain (PEZ) and PTP36, is a 135 kDa cytosolic protein that dephosphorylates tyrosine residues in proteins. PTPN14's Ezrin domain is homologous to erythrocyte Band 4.1 protein, targeting the phosphatase to cytoskeletal elements such as actin. PTPN14 associates with beta-catenin in adhesion zones in cells that are touching, but is nuclear in isolated, proliferating cells. Loss-of-function mutations in PTPN14 are found in 26% of colorectal cancers, suggesting it is a tumor suppressor.