Human/Mouse Patched 1/PTCH (First Extracellular Loop) Antibody

Monoclonal Rat IgG_{2A} Clone # 413220

Catalog Number: MAB41051

DESCRIPTION

Species Reactivity	Human/Mouse
Specificity	Detects mouse Patched 1/PTCH (First Extracellular Loop) in direct ELISAs and Western blots. In direct ELISAs and Western blots, 15% cross-reactivity with recombinant human Patched 2 is observed.
Source	Monoclonal Rat IgG_{2A} Clone # 413220
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	*E. coli*-derived recombinant mouse Patched 1/PTCH Glu108-Asp422 Accession # Q61115
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.

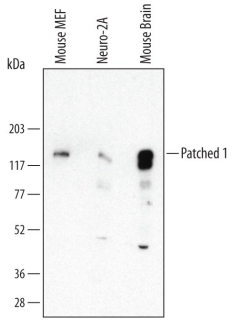
APPLICATIONS

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

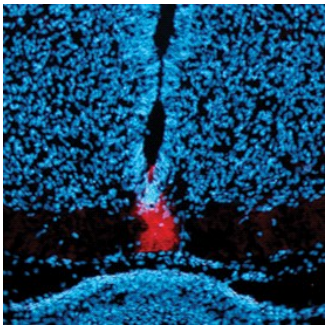
DATA

Western Blot



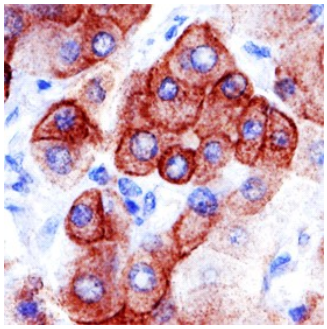
Detection of Mouse Patched 1/PTCH by Western Blot. Western blot shows lysates of MEF mouse embryonic feeder cells, Neuro-2A mouse neuroblastoma cell line, and mouse brain tissue. PVDF Membrane was probed with 1 µg/mL of Rat Anti-Human/Mouse Patched 1/PTCH (First Extracellular Loop) Monoclonal Antibody (Catalog # MAB41051) followed by HRP-conjugated Anti-Rat IgG Secondary Antibody (Catalog # HAF005). A specific band was detected for Patched 1/PTCH at approximately 160 kDa (as indicated). This experiment was conducted under reducing conditions and using Immunoblot Buffer Group 1.

Immunohistochemistry



Patched in Mouse Spinal Cord. Patched was detected in immersion fixed frozen sections of mouse spinal cord using 10 µg/mL Rat Anti-Human/Mouse Patched 1/PTCH (First Extracellular Loop) Monoclonal Antibody (Catalog # MAB41051) overnight at 4 °C. Tissue was stained (red) and counterstained with DAPI (blue). View our protocol for Fluorescent IHC Staining of Frozen Tissue Sections.

Immunohistochemistry



Patched 1/PTCH in Human Esophageal Squamous Cell Carcinoma. Patched 1/PTCH was detected in immersion fixed paraffin-embedded sections of human esophogeal squamous cell carcinoma tissue using Rat Anti-Human/Mouse Patched 1/PTCH (First Extracellular Loop) Monoclonal Antibody (Catalog # MAB41051) at 15 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). Specific staining was localized to plasma membranes. View our protocol for Chromogenic IHC Staining of Paraffin-embedded Tissue Sections.

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.** ● 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
bio-techne.com
Global info@bio-techne.com techsupport@bio-techne.com
North America TEL 800 343 7475 Europe | Middle East | Africa TEL +44 (0)1235 529449
China info.cn@bio-techne.com TEL +86 (21) 52380373
Rest of World bio-techne.com/find-us/distributors TEL +1 612 379 2956

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BACKGROUND

Patched homolog 1 (PTCH, also called PTC, PTC1 or PTCH1) is a 170-175 kDa member of the Patched family of proteins. It is found on multiple cells types and forms a constitutive, inactivating complex with Smoothened. Upon SHH binding to PTC1, Smoothened is released and initiates downstream signaling. Mouse PTCH is a 12 transmembrane, 1434 aa glycoprotein that contains two terminal cytoplasmic domains. Only one mRNA species for PTCH has been reported in mice. However, it would appear likely that two or more splice forms exist, with variation occurring over the first 150 aa of the N-terminus. Over aa 108-422, mouse PTCH shares 97% and 99% aa sequence identity with human and rat PTCH, respectively.

bio-techne
bio-techne.com
Global info@bio-techne.com techsupport@bio-techne.com
North America TEL 800 343 7475 Europe | Middle East | Africa TEL +44 (0)1235 529449
China info.cn@bio-techne.com TEL +86 (21) 52380373
Rest of World bio-techne.com/find-us/distributors TEL +1 612 379 2956