

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human Patched 2/PTCH2 in direct ELISAs and Western blots. In direct ELISAs, less than 5% cross-reactivity with recombinant mouse Patched is observed.
Source	Polyclonal Goat IgG
Purification	Antigen Affinity-purified
Immunogen	<i>E. coli</i> -derived recombinant human Patched 2/PTCH2 first extracellular loop Glu79-Glu392 Accession # Q9Y6C5
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.

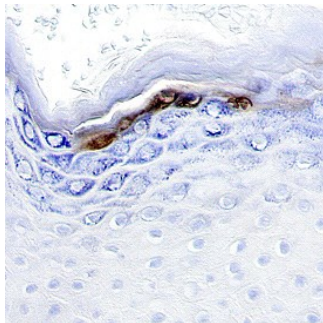
APPLICATIONS

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	0.1 µg/mL	Recombinant Human Patched 2 (First Extracellular Loop)
Immunohistochemistry	5-15 µg/mL	See Below
Intracellular Staining by Flow Cytometry	2.5 µg/10 ⁶ cells	See Below
CyTOF-ready	Ready to be labeled using established conjugation methods. No BSA or other carrier proteins that could interfere with conjugation.	

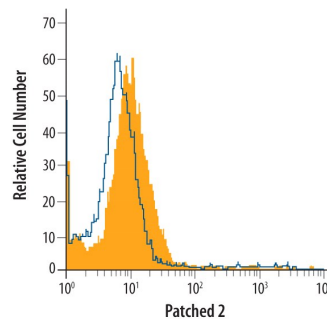
DATA

Immunohistochemistry



Patched 2 in Human Basal Cell Carcinoma. Patched 2 was detected in immersion fixed paraffin-embedded sections of human basal cell carcinoma using 3 µg/mL Goat Anti-Human Patched 2 (First Extracellular Loop) Antigen Affinity-purified Polyclonal Antibody (Catalog # AF4078) 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 with the Anti-Goat HRP-DAB Cell & Tissue Staining Kit (brown; Catalog # CTS008) and counterstained with hematoxylin (blue). Specific labeling was localized to the cytoplasm of keratinocytes. View our protocol for [Chromogenic IHC Staining of Paraffin-embedded Tissue Sections](#).

Intracellular Staining by Flow Cytometry



Detection of Patched 2 in WS-1 Human Cell Line by Flow Cytometry. WS-1 human fetal skin fibroblast cell line was stained with Human Patched 2 (First Extracellular Loop) Antigen Affinity-purified Polyclonal Antibody (Catalog # AF4078, filled histogram) or isotype control antibody (Catalog # AB-108-C, open histogram), followed by Allophycocyanin-conjugated Anti-Goat IgG Secondary Antibody (Catalog # F0108). To facilitate intracellular staining, cells were fixed with paraformaldehyde and permeabilized with saponin.

PREPARATION AND STORAGE

Reconstitution	Reconstitute at 0.2 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

Patched 2 (Ptch2) is a 180-200 kDa 12 transmembrane member of the Patched family. Human PTCH2 is 1203 amino acids (aa) in length. It has two terminal cytoplasmic domains, one between aa 1-57, and a second between aa 1115-1203. Together with Smoothed (SMO), Ptch2 forms a membrane complex that serves as a receptor for Sonic Hedgehog (SHH). Human Ptch2 likely has two isoforms. One shows an eight aa extension of the C-terminus, while a second shows a four aa substitution for the C-terminal 61 amino acids (aa 1143-1203). Over the first extracellular loop human Patched 2 shares 95% and 96% aa sequence identity with mouse and canine Patched 2, respectively.