

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human Plexin B2 in direct ELISAs and Western blots. In direct ELISAs, less than 1% cross-reactivity with recombinant mouse (m) Plexin A1, mPlexin A2, recombinant human (rh) Plexin A4, rhPlexin B1, rhPlexin B3, rhPlexin C1 and rhPlexin D1 is observed.
Source	Polyclonal Sheep IgG
Purification	Antigen Affinity-purified
Immunogen	Chinese hamster ovary cell line CHO-derived recombinant human Plexin B2 Leu20-Arg1160 Accession # O15031
Formulation	Lyophilized from a 0.2 µm filtered solution in PBS with Trehalose. See Certificate of Analysis for details.

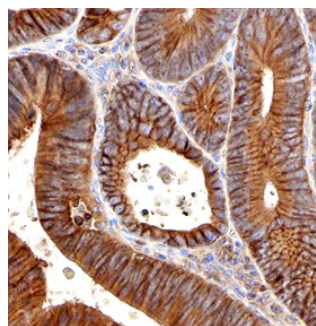
APPLICATIONS

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	5-15 µg/mL	See Below

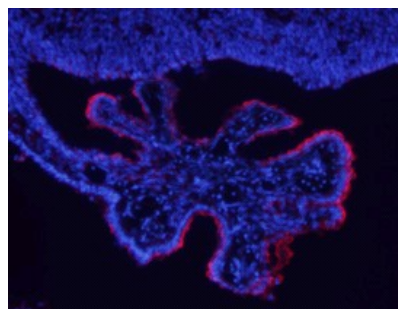
DATA

Immunohistochemistry



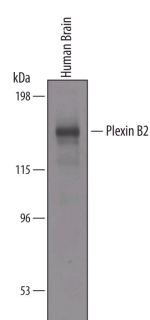
Plexin B2 in Human Colon Cancer Tissue. Plexin B2 was detected in immersion fixed paraffin-embedded sections of human colon cancer using 3 µg/mL Sheep Anti-Human Plexin B2 Antigen Affinity-purified Polyclonal Antibody (Catalog # AF5329) overnight at 4 °C. Before incubation with the primary antibody tissue was subjected to heat-induced epitope retrieval using Antigen Retrieval Reagent-Basic (Catalog # CTS013). Tissue was stained with the Anti-Sheep HRP-DAB Cell & Tissue Staining Kit (brown; Catalog # CTS019) and counterstained with hematoxylin (blue). Specific labeling was localized to the plasma membrane and cytoplasm of epithelial cells. View our protocol for [Chromogenic IHC Staining of Paraffin-embedded Tissue Sections](#).

Immunohistochemistry



Plexin B2 in Mouse Brain. Plexin B2 was detected in perfusion fixed frozen sections of mouse brain (choroid plexus) using 10 µg/mL Sheep Anti-Human Plexin B2 Antigen Affinity-purified Polyclonal Antibody (Catalog # AF5329) overnight at 4 °C. Tissue was stained with the NorthernLights™ 557-conjugated Anti-Sheep IgG Secondary Antibody (red; Catalog # NL010) and counterstained with DAPI (blue). View our protocol for [Fluorescent IHC Staining of Frozen Tissue Sections](#).

Western Blot



Detection of Human Plexin B2 by Western Blot. Western blot shows lysates of human brain tissue. PVDF membrane was probed with 1 µg/mL of Sheep Anti-Human Plexin B2 Antigen Affinity-purified Polyclonal Antibody (Catalog # AF5329) followed by HRP-conjugated Anti-Sheep IgG Secondary Antibody (Catalog # HAF016). A specific band was detected for Plexin B2 at approximately 170 kDa (as indicated). This experiment was conducted under reducing conditions and using [Immunoblot Buffer Group 8](#).

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.
Stability & Storage	<p>Use a manual defrost freezer and avoid repeated freeze-thaw cycles.</p> <ul style="list-style-type: none"> ● 12 months from date of receipt, -20 to -70 °C as supplied. ● 1 month from date of receipt, 2 to 8 °C, reconstituted. ● 6 months from date of receipt, -20 to -70 °C, reconstituted.

BACKGROUND

Plexin B2 is a 240 kDa member of the B subfamily, Plexin family of semaphorin receptors. It is expressed by cerebellar granule cells, neuroepithelium and chondrocytes and serves as a receptor for Sema4C. Mature human Plexin B2 is 1819 amino acid (aa) in length. It is a type I transmembrane (TM) glycoprotein that contains an 1178 aa extracellular domain (ECD) plus a 620 aa cytoplasmic region. The ECD contains one semaphorin domain (aa 20-466) and three IPT repeats (aa 803-1092). The ECD may be cleaved into two subunits, a 170 kDa α -chain (aa 20-1164) and an 80 kDa TM β -chain that remain noncovalently-linked. Multiple splice variants may exist. One shows an alternate start site at Met1369, while a second shows a deletion of aa 67-638. Over aa 20-1160, human Plexin B2 is 82% aa identical to mouse Plexin B2.