

**DESCRIPTION**

<b>Species Reactivity</b>	Human
<b>Specificity</b>	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.
<b>Source</b>	Polyclonal Sheep IgG
<b>Purification</b>	Antigen Affinity-purified
<b>Immunogen</b>	Chinese hamster ovary cell line CHO-derived recombinant human Plexin B2 Leu20-Arg1160 Accession # O15031
<b>Formulation</b>	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.

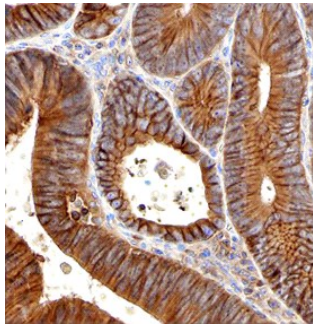
**APPLICATIONS**

**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.

	<b>Recommended Concentration</b>	<b>Sample</b>
<b>Western Blot</b>	1 µg/mL	See Below
<b>Immunohistochemistry</b>	5-15 µg/mL	See Below

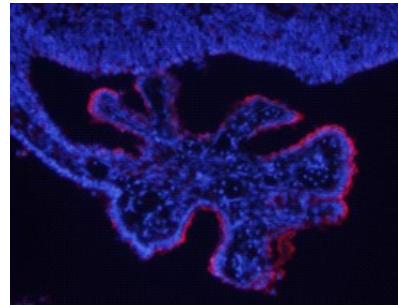
**DATA**

**Immunohistochemistry**



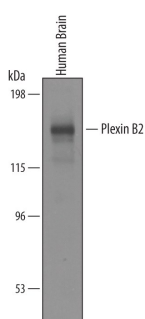
**Plexin B2 in Human Colon Cancer Tissue.** Plexin B2 was detected in immersion fixed paraffin-embedded sections of human colon cancer using 3 µg/mL Sheep Anti-Human Plexin B2 Antigen Affinity-purified Polyclonal Antibody (Catalog # AF5329) overnight at 4 °C. Before incubation with the primary antibody 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**

<b>Reconstitution</b>	Reconstitute at 0.2 mg/mL in sterile PBS.
<b>Shipping</b>	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
<b>Stability &amp; Storage</b>	<b>Use a manual defrost freezer and avoid repeated freeze-thaw cycles.</b> <ul style="list-style-type: none"> <li>• 12 months from date of receipt, -20 to -70 °C as supplied.</li> <li>• 1 month, 2 to 8 °C under sterile conditions after reconstitution.</li> <li>• 6 months, -20 to -70 °C under sterile conditions after reconstitution.</li> </ul>

## 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  $\alpha$ -chain (aa 20-1164) and an 80 kDa TM  $\beta$ -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.