

DESCRIPTION

Species Reactivity	Human/Mouse/Rat
Specificity	Detects mouse and rat Plexin A2 in direct ELISAs and Western blots. In direct ELISAs, less than 1% cross-reactivity with recombinant mouse (m) Plexin A1, mPlexin A3, and recombinant human Plexin B1 is observed.
Source	Polyclonal Goat IgG
Purification	Antigen Affinity-purified
Immunogen	Chinese hamster ovary cell line CHO-derived recombinant mouse Plexin A2 Met35-Pro1237 Accession # P70207
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.

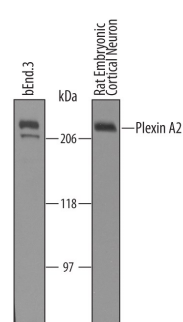
APPLICATIONS

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
Flow Cytometry	2.5 µg/10 ⁶ cells	See Below
Immunocytochemistry	10 µg/mL	See Below
Simple Western	10 µg/mL	See Below
CyTOF-ready	Ready to be labeled using established conjugation methods. No BSA or other carrier proteins that could interfere with conjugation.	

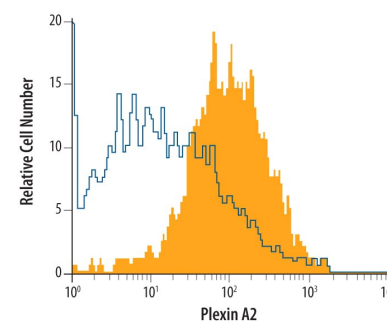
DATA

Western Blot



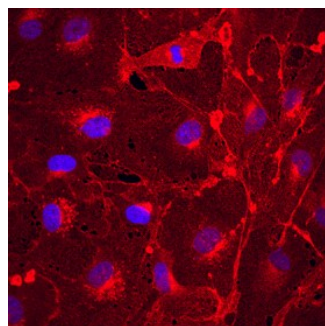
Detection of Mouse and Rat Plexin A2 by Western Blot. Western blot shows lysates of bEnd.3 mouse endothelioma cell line and rat embryonic cortical neuron cells. PVDF Membrane was probed with 1 µg/mL of Goat Anti-Human/Mouse/Rat Plexin A2 Antigen Affinity-purified Polyclonal Antibody (Catalog # AF5486) followed by HRP-conjugated Anti-Goat IgG Secondary Antibody (Catalog # HAF019). A specific band was detected for Plexin A2 at approximately 210 kDa (as indicated). This experiment was conducted under reducing conditions and using Immunoblot Buffer Group 8.

Flow Cytometry



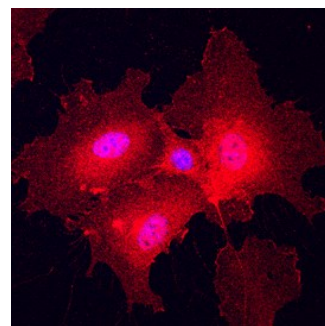
Detection of Plexin A2 in bEnd.3 Mouse Cell Line by Flow Cytometry. bEnd.3 mouse endothelioma cell line was stained with Goat Anti-Human/Mouse/Rat Plexin A2 Antigen Affinity-purified Polyclonal Antibody (Catalog # AF5486, filled histogram) or isotype control antibody (Catalog # AB-108-C, open histogram), followed by Allophycocyanin-conjugated Anti-Goat IgG Secondary Antibody (Catalog # F0108).

Immunocytochemistry



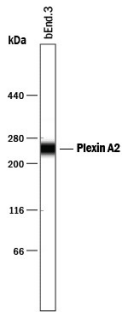
Plexin A2 in bEnd.3 Mouse Cell Line. Plexin A2 was detected in immersion fixed bEnd.3 mouse endothelioma cell line using Goat Anti-Human/Mouse/Rat Plexin A2 Antigen Affinity-purified Polyclonal Antibody (Catalog # AF5486) at 10 µg/mL for 3 hours at room temperature. Cells were stained using the NorthernLights™ 557-conjugated Anti-Goat IgG Secondary Antibody (red; Catalog # NL001) and counterstained with DAPI (blue). Specific staining was localized to cell surfaces and cytoplasm. View our protocol for [Fluorescent ICC Staining of Cells on Coverslips](#).

Immunocytochemistry



Plexin A2 in HUVEC Human Cells. Plexin A2 was detected in immersion fixed HUVEC human umbilical vein endothelial cells using Goat Anti-Human/Mouse/Rat Plexin A2 Antigen Affinity-purified Polyclonal Antibody (Catalog # AF5486) at 10 µg/mL for 3 hours at room temperature. Cells were stained using the NorthernLights™ 557-conjugated Anti-Goat IgG Secondary Antibody (red; Catalog # NL001) and counterstained with DAPI (blue). Specific staining was localized to cell surfaces and cytoplasm. View our protocol for [Fluorescent ICC Staining of Cells on Coverslips](#).

Simple Western



Detection of Mouse Plexin A2 by Simple Western™. Simple Western lane view shows lysates of bEnd.3 mouse endothelioma cell line, loaded at 0.2 mg/mL. A specific band was detected for Plexin A2 at approximately 246 kDa (as indicated) using 10 µg/mL of Goat Anti-Human/Mouse/Rat Plexin A2 Antigen Affinity-purified Polyclonal Antibody (Catalog # AF5486) followed by 1:50 dilution of HRP-conjugated Anti-Goat IgG Secondary Antibody (Catalog # HAF109). This experiment was conducted under reducing conditions and using the 66-440 kDa separation system.



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	<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, 2 to 8 °C under sterile conditions after reconstitution. ● 6 months, -20 to -70 °C under sterile conditions after reconstitution.

BACKGROUND

Plexin A2 (also OCT) is a 220-230 kDa member of the plexin-A subfamily, plexin family of proteins. It is found on cerebellar granule cells, sensory neurons, and cardiac neural crest cells. It participates in cell migration and axon guidance, and does so by serving as a receptor for Sema6A and B, and as a coreceptor with neuropilin-1 for Sema3A and C. Mature mouse Plexin A2 is an 1860 amino acid (aa) type I transmembrane glycoprotein. It contains a 1203 aa extracellular domain (ECD) and a 636 aa cytoplasmic region. The ECD contains one Sema domain (aa 35-508), three PSI domains (aa 510-855) and four IPT regions (aa 858-1228). There is one alternate start site 10 aa upstream of the standard start site. Over aa 35-1237, mouse Plexin A2 shares 96% aa sequence identity with human Plexin A2.