

DESCRIPTION

Species Reactivity	Human/Mouse/Rat
Specificity	Detects human, mouse, and rat Contactin-1 in direct ELISAs and Western blots. In direct ELISAs, less than 1% cross-reactivity with recombinant mouse (rm) Contactin-2 and rmContactin-4 is observed.
Source	Polyclonal Sheep IgG
Purification	Antigen Affinity-purified
Immunogen	Mouse myeloma cell line NS0-derived recombinant mouse Contactin-1 Asp21-Thr999 Accession # AAH66864
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 either lyophilized or as a 0.2 µm filtered solution in PBS.

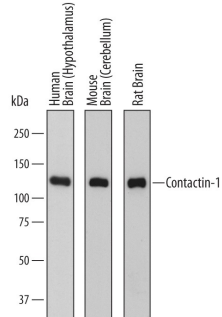
APPLICATIONS

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	0.2 µg/mL	See Below
Immunohistochemistry	1-15 µg/mL	See Below

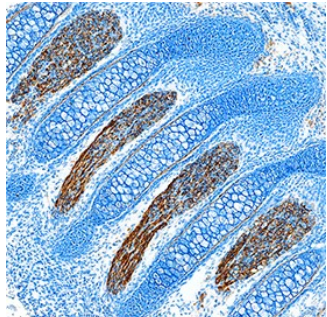
DATA

Western Blot



Detection of Human, Mouse, and Rat Contactin-1 by Western Blot. Western blot shows lysates of human brain (hypothalamus) tissue, mouse brain (cerebellum) tissue, and rat brain tissue. PVDF membrane was probed with 0.2 µg/mL of Sheep Anti-Human/Mouse/Rat Contactin-1 Antigen Affinity-purified Polyclonal Antibody (Catalog # AF7549) followed by HRP-conjugated Anti-Sheep IgG Secondary Antibody (Catalog # HAF016). A specific band was detected for Contactin-1 at approximately 135 kDa (as indicated). This experiment was conducted under reducing conditions and using *Immunoblot Buffer Group 1*.

Immunohistochemistry



Contactin-1 in Mouse Embryo. Contactin-1 was detected in immersion fixed frozen sections of mouse embryo (13 d.p.c.) using Sheep Anti-Human/Mouse/Rat Contactin-1 Antigen Affinity-purified Polyclonal Antibody (Catalog # AF7549) at 1.7 µg/mL overnight at 4 °C. Tissue was stained using the Anti-Sheep HRP-DAB Cell & Tissue Staining Kit (brown; Catalog # CTS019) and counterstained with hematoxylin (blue). Specific staining was localized to dorsal root ganglia. View our protocol for *Chromogenic IHC Staining of Frozen Tissue Sections*.

PREPARATION AND STORAGE

Reconstitution	Sterile PBS to a final concentration of 0.2 mg/mL.
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

CNTN1 (Contactin-1; also neuronal cell surface protein F3/F11) is a 135-145 kDa GPI-linked glycoprotein member of the Contactin family, Ig superfamily of molecules. It is expressed on the surface of oligodendrocytes and neurons, principally on axons, and has multiple binding partners. In particular, it binds to astrocyte tenascin-C, Schwann cell NF/neurofascin-155, and oligodendrocyte produced tenascin-R and Notch in-trans, plus paranodin in-cis. Tenascin-R interactions inhibit neurite outgrowth, paranodin/NF155 interactions may contribute to Ranvier node development, and Notch ligation results in oligodendrocyte maturation. CNTN1 also binds to chondroitin sulfate-E, an interaction that initiates neurite outgrowth. Mouse CNTN1 is synthesized as a 1020 amino acid (aa) preproprecursor (aa 1-1020). It contains a 20 aa signal sequence, followed by a 981 aa mature region (aa 21-1001), and a 19 aa propeptide. The mature region possesses six consecutive C2-type Ig-like domains (aa 41-603) that regulate neurite outgrowth, followed by three FN-type III domains (aa 605-901) that regulate adhesiveness. It is estimated that 15% of the native MW constitutes carbohydrate, part of which is represented by the HNK-1 antigen (3-sulfo-GluA-Gal-GlcNAc). Over aa 20-999, mouse CNTN1 shares 96% and 99% aa sequence identity with human and rat CNTN1, respectively.