

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human Caspr1 in direct ELISAs. In direct ELISAs, less than 1% cross-reactivity with recombinant human Caspr2 is observed.
Source	Polyclonal Sheep IgG
Purification	Antigen Affinity-purified
Immunogen	Chinese hamster ovary cell line CHO-derived recombinant human Caspr1 Trp20-Gly1280 Accession # P78357
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.

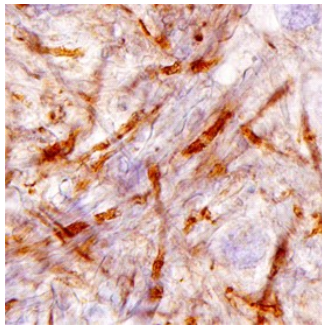
APPLICATIONS

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
Immunohistochemistry	5-15 µg/mL	See Below

DATA

Immunohistochemistry



Caspr1 in Human Brain. Caspr1 was detected in immersion fixed paraffin-embedded sections of human brain using Sheep Anti-Human Caspr1 Antigen Affinity-purified Polyclonal Antibody (Catalog # AF7548) at 5 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 paranodal axonal regions in neurons. View our protocol for [Chromogenic IHC Staining of Paraffin-embedded 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

CASPR1 (Contactin-Associated Protein-1; also Neurexin-4 and p190) is a 180-195 kDa member of the neurexin family of proteins. It is expressed on both axons and dendrites of neurons, and likely serves the critical function of directing the movement of low MW contactin, AMPA receptors, and Na⁺ plus K⁺ channels to appropriate sites on the cell membrane. This indicates participation in key processes such as myelination and excitatory neurotransmission. Mature human CASPR1 is a 1365 amino acid (aa) type I transmembrane protein. It contains a 1264 aa extracellular region (aa 20-1283) plus an 80 aa cytoplasmic domain. The extracellular region is highly modular, possessing one discoidin (carbohydrate-binding) domain (aa 24-158), four laminin G-like domains (aa 203-513, 813-956 and 1088-1250), two EGF-like domains (aa 540-577 and 957-996) and one fibrinogen C-terminal globular regions (aa 576-795). There is one potential alternative start site at Met507. Over aa 20-1280, human CASPR1 shares 94% aa sequence identity with mouse CASPR1.