

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human Caspr1 in direct ELISAs. In direct ELISAs, no cross-reactivity with recombinant human Caspr2 is observed.
Source	Monoclonal Mouse IgG _{2A} Clone # 753232
Purification	Protein A or G purified from hybridoma culture supernatant
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.

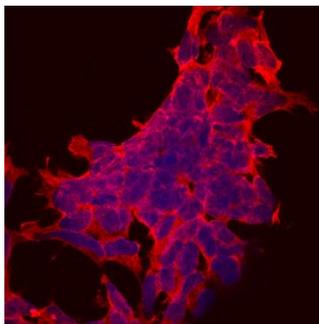
APPLICATIONS

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
Immunocytochemistry	8-25 µg/mL	See Below

DATA

Immunocytochemistry



Caspr1 in IMR32 Human Cell Line. Caspr1 was detected in immersion fixed IMR32 human neuroblastoma cell line using Mouse Anti-Human Caspr1 Monoclonal Antibody (Catalog # MAB7548) at 10 µg/mL for 3 hours at room temperature. Cells were stained using the NorthernLights™ 557-conjugated Anti-Mouse IgG Secondary Antibody (red; Catalog # NL007) 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](#).

PREPARATION AND STORAGE

Reconstitution	Sterile PBS to a final concentration of 0.5 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

Contactin-associated protein 1 (Caspr1), also known as Neurexin-4, Paranodin, and NCP1, is an approximately 190 kDa transmembrane protein that is concentrated at paranodal junctions of axons during myelination. It is required for junction formation and ion channel localization and plays an important role in the propagation of saltatory nerve conduction. Caspr1 interacts with Contactins and Nogo-A at the paranodal junction and inhibits the binding of Contactin to glial cell Neurofascin. Caspr1 is proteolytically cleaved by Reelin, and this action is inhibited by the cellular prion protein (PrP). Mature human Caspr1 consists of a 1264 amino acid (aa) extracellular domain (ECD), a 21 aa transmembrane segment, and an 80 aa cytoplasmic domain. The ECD contains one Factor 5/8-like domain, four Laminin-G-like domains, two EGF-like domains, and one Fibrinogen-like domain. Within the ECD, human Caspr1 shares 95% aa sequence identity with mouse and rat Caspr1.