

CASPR2 (N-16): sc-11178

BACKGROUND

CASPR (for contactin-associated protein, also designated Paranodin) is a transmembrane glycoprotein of the neurexin superfamily that is highly enriched in regions of myelinated axons. The axons of myelinated nerves in the adult nervous system possess specialized subcellular structures essential for efficient and rapid action potential propagation. CASPR and the closely related molecule CASPR2, a mammalian homolog of *Drosophila* Neuexin IV (Nrx-IV), demarcate distinct subdomains in myelinated axons. While CASPR is present at the paranodal junctions, CASPR2 is precisely colocalized with Shaker-like K⁺ channels in the juxtaparanodal region. CASPR2 specifically associates with Kv1.1, Kv1.2, and their Kvβ2 subunit. CASPR family members may play a role in the local differentiation of the axon into distinct functional subdomains.

REFERENCES

1. Poliak, S., et al. 1997. Caspr2, a new member of the neurexin superfamily, is localized at the juxtaparanodes of myelinated axons and associates with K⁺ channels. *Neuron* 24: 1037-1104.
2. Einheber, S., et al. 1997. The axonal membrane protein Caspr, a homologue of neurexin IV, is a component of the septate-like paranodal junctions that assemble during myelination. *J. Cell Biol.* 139: 1495-1506.

CHROMOSOMAL LOCATION

Genetic locus: CNTNAP2 (human) mapping to 7q35.

SOURCE

CASPR2 (N-16) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of CASPR2 of human origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-11178 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

CASPR2 (N-16) is recommended for detection of CASPR2 of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

CASPR2 (N-16) is also recommended for detection of CASPR2 in additional species, including canine.

Suitable for use as control antibody for CASPR2 siRNA (h): sc-41917, CASPR2 shRNA Plasmid (h): sc-41917-SH and CASPR2 shRNA (h) Lentiviral Particles: sc-41917-V.

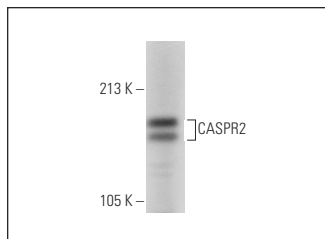
Molecular Weight of CASPR2: 148 kDa.

Positive Controls: human brain tissue extract.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

DATA



CASPR2 (N-16): sc-11178. Western blot analysis of CASPR2 expression in human brain tissue extract.

STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

RESEARCH USE

For research use only, not for use in diagnostic procedures.

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.



Try **CASPR2 (H-10): sc-398454**, our highly recommended monoclonal alternative to CASPR2 (N-16).