SANTA CRUZ BIOTECHNOLOGY, INC.

CASPR (H-66): sc-25669

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Neurexins comprise a family of neuronal cell surface proteins, which include neurexin I (NRXN1), neurexin II (NRXN2), neurexin III (NRXN3) and CASPR (neurexin IV). Neurexins I-III are expressed as α and β isoforms. The α isoforms are made of three cassettes, which contain two LNS (laminin A, neurexins, sex hormone-binding)-domains separated by EGF domains, followed by a transmembrane region and a 55 amino acid cytoplasmic C-terminal. The α isoforms bind to neurexophilins at the second LNS site, and to the excitatory neurotoxin α-latrotoxin. The β isoforms have only one LNS-domain, bind to neuroligins and play a role in the formation and remodeling of synapses. CASPR (for contactin-associated protein 1, also designated paranodin in mouse), contains an extracellular domain similar to the other three neurexins, and binds to the surface glycoprotein contactin. CASPR and the closely related CASPR2, a mammalian homolog of *Drosophila neurexin* IV (Nrx-IV), demarcate distinct subdomains in myelinated axons. Specifically, CASPR exists at the paranodal junctions, while CASPR2 co-localizes with Shaker-like K^+ channels in the juxtaparanodal region. CASPR may play a role in the communication of glial cells and neurons during development.

CHROMOSOMAL LOCATION

Genetic locus: CNTNAP1 (human) mapping to 17q21.2; Cntnap1 (mouse) mapping to 11 D.

SOURCE

CASPR (H-66) is a rabbit polyclonal antibody raised against amino acids 1251-1316 of CASPR 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.

RESEARCH USE

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

APPLICATIONS

CASPR (H-66) is recommended for detection of CASPR of mouse, rat and 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), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

CASPR (H-66) is also recommended for detection of CASPR in additional species, including equine and canine.

Suitable for use as control antibody for CASPR siRNA (h): sc-41915, CASPR siRNA (m): sc-41916, CASPR shRNA Plasmid (h): sc-41915-SH, CASPR shRNA Plasmid (m): sc-41916-SH, CASPR shRNA (h) Lentiviral Particles: sc-41915-V and CASPR shRNA (m) Lentiviral Particles: sc-41916-V.

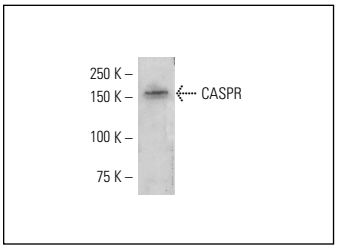
Molecular Weight of CASPR: 165 kDa.

Positive Controls: mouse brain extract: sc-2253.

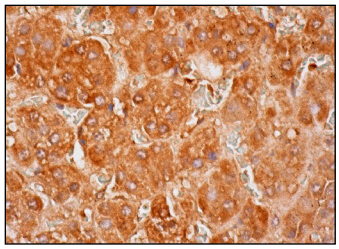
RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (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 goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941. 4) Immunohistochemistry: use ImmunoCruz™: sc-2051 or ABC: sc-2018 rabbit IgG Staining Systems.

DATA



CASPR (H-66): sc-25669. Western blot analysis of CASPR expression in mouse brain tissue extract.



CASPR (H-66): sc-25669. Immunoperoxidase staining of formalin fixed, paraffin-embedded human adrenal gland tissue showing cytoplasmic staining of glandular cells.

STORAGE

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

PROTOCOLS

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