

#3731 Store at -20C

Caspr2 Antibody



Cell Signaling
TECHNOLOGY®

Orders: 877-616-CELL (2355)
orders@cellsignal.com

Support: 877-678-TECH (8324)

Web: info@cellsignal.com
cellsignal.com

3 Trask Lane | Danvers | Massachusetts | 01923 | USA

For Research Use Only. Not for Use in Diagnostic Procedures.

Applications:	Reactivity:	Sensitivity:	MW (kDa):	Source:	UniProt ID:	Entrez-Gene Id:
WB	H M R	Endogenous	150	Rabbit	#Q9UHC6	26047

Product Usage Information

Application

Western Blotting

Dilution

1:1000

Storage

Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA and 50% glycerol. Store at –20°C. Do not aliquot the antibody.

Specificity / Sensitivity

Caspr2 Antibody detects endogenous levels of total Caspr2 protein.

Source / Purification

Polyclonal antibodies are produced by immunizing animals with a synthetic peptide surrounding Glu1320 of human Caspr2. Antibodies are purified by protein A and peptide affinity chromatography.

Background

Contactin-associated protein 2 (Caspr2) is a type I transmembrane protein and member of the neurexin superfamily that mediates nervous system cell-cell interactions through the Neurexin IV-Caspr-Paranodin (NCP) complex (1). A multiprotein complex consisting of TAG-1, Caspr2, K⁺ channel, PSD95 and protein 4.1B mediates the molecular interactions at the juxtaparanodal region of myelinated axons, with homophilic TAG-1 interactions mediating the binding of this complex to glia (2,3). Caspr2 protein localizes to juxtaparanodal regions of myelinated axons where it forms a *cis*-complex with the immunoglobulin-like cell adhesion molecule TAG-1. Caspr2 also binds to Shaker K⁺ channels Kv1.1, Kv1.2, and their Kvβ2 subunit. A PDZ domain at the Caspr2 carboxy terminus mediates the Caspr2-K⁺ channel association. Caspr2 is required for proper K⁺ channel localization, as Caspr2 deletion causes the redistribution of channels along the internodes (1-3). Furthermore, Caspr2 binds to protein 4.1B and connects the protein complex to the axonal cytoskeleton (4). Mutations in the Caspr2 gene have been linked to focal epilepsy, cortical dysplasia and Gilles de la Tourette syndrome (5,6).

Background References

1. Poliak, S. et al. (1999) *Neuron* 24, 1037-47.
2. Poliak, S. et al. (2003) *J Cell Biol* 162, 1149-60.
3. Traka, M. et al. (2003) *J Cell Biol* 162, 1161-72.
4. Denisenko-Nehrbass, N. et al. (2003) *Eur J Neurosci* 17, 411-6.
5. Verkerk, A.J. et al. (2003) *Genomics* 82, 1-9.
6. Strauss, K.A. et al. (2006) *N Engl J Med* 354, 1370-7.

Species Reactivity

Species reactivity is determined by testing in at least one approved application (e.g., western blot).

Western Blot Buffer

IMPORTANT: For western blots, incubate membrane with diluted primary antibody in 5% w/v BSA, 1X TBS, 0.1% Tween® 20 at 4°C with gentle shaking, overnight.

Applications Key

WB: Western Blotting

Cross-Reactivity Key

H: human **M:** mouse **R:** rat **Hm:** hamster **Mk:** monkey **Vir:** virus **Mi:** mink **C:** chicken **Dm:** D. melanogaster **X:** Xenopus **Z:** zebrafish **B:** bovine **Dg:** dog **Pg:** pig **Sc:** S. cerevisiae **Ce:** C. elegans **Hr:** horse **GP:** Guinea Pig **Rab:** rabbit **All:** all species expected

Trademarks and Patents

Cell Signaling Technology is a trademark of Cell Signaling Technology, Inc. All other trademarks are the property of their respective owners. Visit cellsignal.com/trademarks for more information.

Limited Uses

Except as otherwise expressly agreed in a writing signed by a legally authorized representative of CST, the following terms apply to Products provided by CST, its affiliates or its distributors. Any Customer's terms and conditions that are in addition to, or different from, those contained herein, unless separately accepted in writing by a legally authorized representative of CST, are rejected and are of no force or effect.

Products are labeled with For Research Use Only or a similar labeling statement and have not been approved, cleared, or licensed by the FDA or other regulatory foreign or domestic entity, for any purpose. Customer shall not use any Product for any diagnostic or therapeutic purpose, or otherwise in any manner that conflicts with its labeling statement. Products sold or licensed by CST are provided for Customer as the end-user and solely for research and development uses. Any use of Product for diagnostic, prophylactic or therapeutic purposes, or any purchase of Product for resale (alone or as a component) or other commercial purpose, requires a separate license from CST. Customer shall (a) not sell, license, loan, donate or otherwise transfer or make available any Product to any third party, whether alone or in combination with other materials, or use the Products to manufacture any commercial products, (b) not copy, modify, reverse engineer, decompile, disassemble or otherwise attempt to discover the underlying structure or technology of the Products, or use the Products for the purpose of developing any products or services that would compete with CST products or services, (c) not alter or remove from the Products any trademarks, trade names, logos, patent or copyright notices or markings, (d) use the Products solely in accordance with CST Product Terms of Sale and any applicable documentation, and (e) comply with any license, terms of service or similar agreement with respect to any third party products or services used by Customer in connection with the Products.