

Store at  
-20°C

#26372

## Contactin-2 (D4M7G) Rabbit mAb

www.cellsignal.com

Support: 877-678-TECH (8324)  
www.cellsignal.com/supportOrders: 877-616-CELL (2355)  
orders@cellsignal.comEntrez-Gene ID #6900  
UniProt ID #Q02246

New 04/15

For Research Use Only. Not For Use In Diagnostic Procedures.

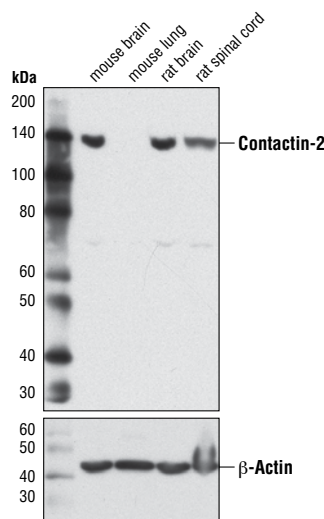
Applications W Endogenous	Species Cross-Reactivity* M, R, (H)	Molecular Wt. 130 kDa	Isotype Rabbit IgG**
---------------------------------	--	--------------------------	-------------------------

**Background:** Myelinated axons contain un-myelinated gaps called nodes of Ranvier. These regularly spaced gaps are critical for the proper propagation and rapid conduction of nerve impulses in the central and peripheral nervous system (1). The structure and organization of the nodes of Ranvier is dictated by interaction between the axon and glial cells (2). Voltage-gated sodium channels concentrated at the nodes and potassium channels clustered at the paranodes are responsible for propagation of the action potentials (3,4). Other proteins that contribute to the architecture and function of the nodes of Ranvier include  $\beta$ IV spectrin (5), ankyrin-G (6), and the L1 cell adhesion molecules, neurofascin and NrCAM (7,8).

Contactin-2 (CNTN2, TAG-1) is a glycosyl-phosphatidylinositol-anchored cell adhesion protein that is expressed at the juxtaparanodal region of the nodes of Ranvier by oligodendrocytes, Schwann cells, and axons (9,10). Contactin-2 plays an important role in the proper organization of the juxtaparanodes through interaction with Caspr2 and the recruitment of the Kv1.1 and Kv1.2 potassium channel subunits (11). Research studies indicate that contactin-2 is a substrate of  $\beta$ -secretase 1 (12,13). A deletion mutation in the corresponding *CNTN2* gene results in familial adult myoclonic epilepsy-5, which is characterized by seizures, involuntary myoclonic muscle twitches, and mild intellectual disability (14).

**Specificity/Sensitivity:** Contactin-2 (D4M7G) Rabbit mAb recognizes endogenous levels of total contactin-2 protein.

**Source/Purification:** Monoclonal antibody is produced by immunizing animals with a synthetic peptide corresponding to residues surrounding Val375 of human contactin-2 protein.



Western blot analysis of extracts from various tissue using Contactin-2 (D4M7G) Rabbit mAb (upper) and  $\beta$ -Actin (D6A8) Rabbit mAb #8457 (lower).

**Storage:** Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100  $\mu$ g/ml BSA, 50% glycerol and less than 0.02% sodium azide. Store at  $-20^{\circ}\text{C}$ . Do not aliquot the antibody.

\*Species cross-reactivity is determined by western blot.

\*\*Anti-rabbit secondary antibodies must be used to detect this antibody.

**Recommended Antibody Dilutions:**

Western blotting 1:1000

For product specific protocols and a complete listing of recommended companion products please see the product web page at [www.cellsignal.com](http://www.cellsignal.com)

**Background References:**

- (1) Black, J.A. et al. (1990) *Trends Neurosci* 13, 48-54.
- (2) Salzer, J.L. (1997) *Neuron* 18, 843-6.
- (3) Waxman, S.G. et al. (1989) *Proc Natl Acad Sci U S A* 86, 1406-10.
- (4) Ritchie, J.M. (1992) *Trends Neurosci* 15, 345-51.
- (5) Berghs, S. et al. (2000) *J Cell Biol* 151, 985-1002.
- (6) Zhou, D. et al. (1998) *J Cell Biol* 143, 1295-304.
- (7) Davis, J.Q. et al. (1996) *J Cell Biol* 135, 1355-67.
- (8) Ratcliffe, C.F. et al. (2001) *J Cell Biol* 154, 427-34.
- (9) Traka, M. et al. (2002) *J Neurosci* 22, 3016-24.
- (10) Girault, J.A. and Peles, E. (2002) *Curr Opin Neurobiol* 12, 476-85.
- (11) Traka, M. et al. (2003) *J Cell Biol* 162, 1161-72.
- (12) Kuhn, P.H. et al. (2012) *EMBO J* 31, 3157-68.
- (13) Gautam, V. et al. (2014) *Mol Neurodegener* 9, 4.
- (14) Stogmann, E. et al. (2013) *Brain* 136, 1155-60.

Tween is a registered trademark of ICI Americas, Inc.

Thank you for your recent purchase. If you would like to provide a review visit [www.cellsignal.com/comments](http://www.cellsignal.com/comments).

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

© 2015 Cell Signaling Technology, Inc.

Cell Signaling Technology is a trademark of Cell Signaling Technology, Inc.

 Cell Signaling  
TECHNOLOGY®

Applications: W—Western IP—Immunoprecipitation IHC—Immunohistochemistry ChIP—Chromatin Immunoprecipitation IF—Immunofluorescence F—Flow cytometry E-P—ELISA-Peptide Species Cross-Reactivity: H—human M—mouse R—rat Hm—hamster Mk—monkey 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 All—all species expected Species enclosed in parentheses are predicted to react based on 100% homology.