

CRMP-2 (903D2N): sc-517648

BACKGROUND

Collapsin response mediator proteins (CRMPs), including CRMP-1 (DRP-1), CRMP-2 (DRP-2 or TOAD64), CRMP-3 (DRP-4), CRMP-4 (DRP-3) and CRMP-5 (DRP-5), mediate signal transduction after exposure of neural cells to the axon guidance molecule Semaphorin 3A (SEMA3A)/collapsin. CRMPs are present in the developing cerebral cortex and neocortical neurons and are responsive to SEMA3A. In the adult brain, the expression of CRMPs is dramatically downregulated. However, they remain expressed in structures that retain their capacity for differentiation and plasticity. CRMP-2 is involved in axonal growth and guidance. The human CRMP-2 gene maps to 8p21.2, a chromosomal region that has been previously shown to have a significant linkage to schizophrenia and to several deficit symptoms of schizophrenia.

REFERENCES

1. Kitamura, K., et al. 1999. Characterization of the human dihydropyrimidinase-related protein 2 (DRP-2) gene. *DNA Res.* 6: 291-297.
2. Gu Y., et al. 2000. Neurofibrillary tangle-associated collapsin response mediator protein-2 (CRMP-2) is highly phosphorylated on Thr-509, Ser-518, and Ser-522. *Biochemistry* 6: 4267-4275.
3. Nakata K., et al. 2003. The human dihydropyrimidinase-related protein 2 gene on chromosome 8p21 is associated with paranoid-type schizophrenia. *Biol. Psychiatry* 53: 571-576.
4. Rosslenbroich, V., et al. 2003. Subcellular localization of collapsin response mediator proteins to lipid rafts. *Biochem. Biophys. Res. Commun.* 305: 392-399.
5. Quach, T.T., et al. 2004. Involvement of collapsin response mediator proteins in the neurite extension induced by neurotrophins in dorsal root ganglion neurons. *Mol. Cell. Neurosci.* 25: 433-443.
6. Hong L.E., et al. 2005. Dihydropyrimidinase-related protein 2 (DRP-2) gene and association to deficit and nondeficit schizophrenia. *Am. J. Med. Genet. B Neuropsychiatr. Genet.* 136B: 8-11.

CHROMOSOMAL LOCATION

Genetic locus: DPYSL2 (human) mapping to 8p21.2; Dpysl2 (mouse) mapping to 14 D1.

SOURCE

CRMP-2 (903D2N) is a mouse monoclonal antibody raised against a KLH-coupled peptide corresponding to amino acids 463-492 of CRMP-2 of human origin.

PRODUCT

Each vial contains 100 µg IgG_{2b} in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

STORAGE

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

APPLICATIONS

CRMP-2 (903D2N) is recommended for detection of CRMP-2 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000).

Suitable for use as control antibody for CRMP-2 siRNA (h): sc-44160, CRMP-2 siRNA (m): sc-44486, CRMP-2 shRNA Plasmid (m): sc-44486-SH, CRMP-2 shRNA (h) Lentiviral Particles: sc-44160-V and CRMP-2 shRNA (m) Lentiviral Particles: sc-44486-V.

Molecular Weight of CRMP-2: 64 kDa.

RESEARCH USE

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

PROTOCOLS

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