

# CRMP-2 (1B1): sc-101348

## 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/collapsin. CRMPs are present in the developing cerebral cortex and neocortical neurons and are responsive to semaphorin 3A. 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 is located in 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. Rosslonbroich, V., et al. 2003. Subcellular localization of collapsin response mediator proteins to lipid rafts. *Biochem. Biophys. Res. Commun.* 305: 392-399.
5. Quach, TT., 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 (DRP2) gene and association to deficit and nondeficit schizophrenia. *Am. J. Med. Genet. B Neuropsychiatr. Genet.* 136: 8-11.

## CHROMOSOMAL LOCATION

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

## SOURCE

CRMP-2 (1B1) is a mouse monoclonal antibody raised against a synthetic peptide derived from the C-terminus of CRMP-2 of human origin.

## PRODUCT

Each vial contains 100 µg IgG<sub>2a</sub> in 1.0 ml of PBS with 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.

## RESEARCH USE

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

## APPLICATIONS

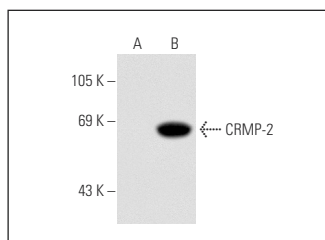
CRMP-2 (1B1) is recommended for detection of CRMP-2 of mouse, rat and human origin by Western Blotting (starting dilution to be determined by researcher, dilution range 1:100-1:5000), immunoprecipitation [1-2 µl per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution to be determined by researcher, dilution range 1:50-1:2500) and immunohistochemistry (including paraffin-embedded sections) (starting dilution to be determined by researcher, dilution range 1:50-1:2500).

Suitable for use as control antibody for CRMP-2 siRNA (h): sc-44485, CRMP-2 siRNA (m): sc-44486, CRMP-2 shRNA Plasmid (h): sc-44485-SH, CRMP-2 shRNA Plasmid (m): sc-44486-SH, CRMP-2 shRNA (h) Lentiviral Particles: sc-44485-V and CRMP-2 shRNA (m) Lentiviral Particles: sc-44486-V.

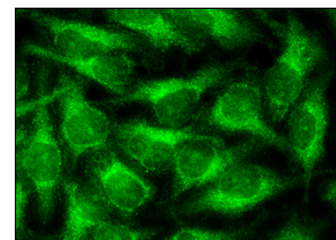
Molecular Weight of CRMP-2: 64 kDa.

Positive Controls: CRMP-2 (h): 293T Lysate: sc-116652.

## DATA



CRMP-2 (1B1): sc-101348. Western blot analysis of CRMP-2 expression in non-transfected: sc-117752 (A) and human CRMP-2 transfected: sc-116652 (B) 293T whole cell lysates.



CRMP-2 (1B1): sc-101348. Immunofluorescence staining of methanol-fixed HeLa cells showing cytoplasmic localization.

## SELECT PRODUCT CITATIONS

1. Ho, W.H., et al. 2012. Proteomic identification of a novel HSP 90-containing protein-mineral complex which can be induced in cells in response to massive calcium influx. *J. Proteome Res.* 11: 3160-3174.
2. Sutinen, E.M., et al. 2014. Interleukin-18 alters protein expressions of neurodegenerative diseases-linked proteins in human SH-SY5Y neuron-like cells. *Front. Cell. Neurosci.* 8: 214.

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) for detailed protocols and support products.