

CRMP (D-5): sc-377155



The Power to Question

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 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* 39: 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.

SOURCE

CRMP (D-5) is a mouse monoclonal antibody raised against amino acids 273-572 mapping at the C-terminus of CRMP-2 of human origin.

PRODUCT

Each vial contains 200 µg IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

CRMP (D-5) is available conjugated to agarose (sc-377155 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-377155 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-377155 PE), fluorescein (sc-377155 FITC), Alexa Fluor® 488 (sc-377155 AF488), Alexa Fluor® 546 (sc-377155 AF546), Alexa Fluor® 594 (sc-377155 AF594) or Alexa Fluor® 647 (sc-377155 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-377155 AF680) or Alexa Fluor® 790 (sc-377155 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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APPLICATIONS

CRMP (D-5) is recommended for detection of CRMP-1, CRMP-2, CRMP-3 and CRMP-4 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

CRMP (D-5) is also recommended for detection of CRMP-1, CRMP-2, CRMP-3, CRMP-4 in additional species, including equine, canine, bovine and porcine.

Molecular Weight of CRMP: 64 kDa.

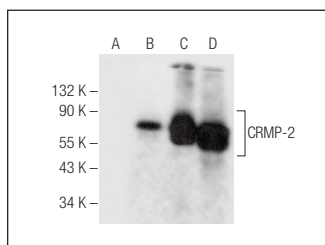
Positive Controls: CRMP-2 (h): 293T Lysate: sc-116652, Jurkat whole cell lysate: sc-2204 or HUV-EC-C whole cell lysate: sc-364180.

RECOMMENDED SUPPORT REAGENTS

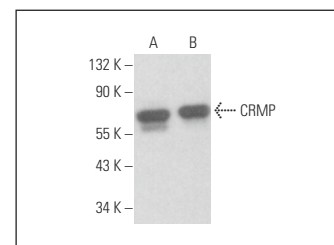
To ensure optimal results, the following support reagents are recommended:

- 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 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 m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

DATA



CRMP (D-5): sc-377155. Western blot analysis of CRMP-2 expression in non-transfected 293T: sc-117752 (A), human CRMP-2 transfected 293T: sc-116652 (B), Jurkat (C) and HUV-EC-C (D) whole cell lysates.



CRMP (D-5): sc-377155. Western blot analysis of CRMP expression in H69AR (A) and SH-SY5Y (B) whole cell lysates.

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.

PROTOCOLS

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