

CRMP-1 (D-4): sc-365348

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-1 is also involved in cancer invasion and metastasis.

REFERENCES

- Torres, R. and Polymeropoulos, M.H. 1998. Genomic organization and localization of the human CRMP-1 gene. *DNA Res.* 5: 393-395.
- Shih, J.Y., et al. 2003. Collapsin response mediator protein-1: a novel invasion-suppressor gene. *Clin. Exp. Metastasis* 20: 69-76.
- Rosslbroich, V., et al. 2003. Subcellular localization of collapsin response mediator proteins to lipid rafts. *Biochem. Biophys. Res. Commun.* 305: 392-399.
- Sivakumaran, T.A. and Lesperance, M.M. 2004. Haplotype and linkage disequilibrium analysis of the CRMP1 and EVC genes. *Int. J. Mol. Med.* 14: 903-907.

CHROMOSOMAL LOCATION

Genetic locus: CRMP1 (human) mapping to 4p16.2; Crmp1 (mouse) mapping to 5 B3.

SOURCE

CRMP-1 (D-4) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 497-523 near the C-terminus of CRMP-1 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-1 (D-4) is available conjugated to agarose (sc-365348 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-365348 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-365348 PE), fluorescein (sc-365348 FITC), Alexa Fluor® 488 (sc-365348 AF488), Alexa Fluor® 546 (sc-365348 AF546), Alexa Fluor® 594 (sc-365348 AF594) or Alexa Fluor® 647 (sc-365348 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-365348 AF680) or Alexa Fluor® 790 (sc-365348 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-365348 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

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RESEARCH USE

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

APPLICATIONS

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

Suitable for use as control antibody for CRMP-1 siRNA (h): sc-60445, CRMP-1 siRNA (m): sc-60446, CRMP-1 shRNA Plasmid (h): sc-60445-SH, CRMP-1 shRNA Plasmid (m): sc-60446-SH, CRMP-1 shRNA (h) Lentiviral Particles: sc-60445-V and CRMP-1 shRNA (m) Lentiviral Particles: sc-60446-V.

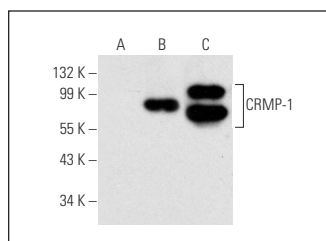
Molecular Weight of CRMP-1: 66 kDa.

Positive Controls: IMR-32 cell lysate: sc-2409, mouse cerebellum extract: sc-2403 or CRMP-1 (h): 293T Lysate: sc-176660.

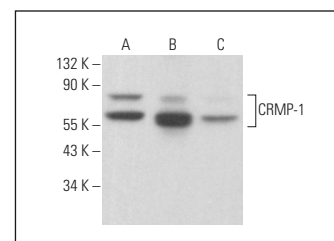
RECOMMENDED SUPPORT REAGENTS

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-1 (D-4): sc-365348. Western blot analysis of CRMP-1 expression in non-transfected 293T: sc-117752 (A), human CRMP-1 transfected 293T: sc-176660 (B) and IMR-32 (C) whole cell lysates.



CRMP-1 (D-4): sc-365348. Western blot analysis of CRMP-1 expression in IMR-32 whole cell lysate (A) and mouse postnatal brain (B) and mouse cerebellum (C) tissue extracts.

SELECT PRODUCT CITATIONS

- Chua, J.Y., et al. 2021. FEZ1 forms complexes with CRMP1 and DCC to regulate axon and dendrite development. *eNeuro* 8: ENEURO.0193-20.2021.

STORAGE

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