

# CRMP-4 (V-17): sc-27321

## 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. Developing neurons in the adult hippocampus of mammals, known as the dentate gyrus, express CRMP-4. Rodent neocortical neurons express CRMP-4 in the perikaryon, in neurites and at growth cones.

## REFERENCES

1. Kato, Y., Hamajima, N., Inagaki, H., Okamura, N., Koji, T., Sasaki, M. and Nonaka, M. 1998. Post-meiotic expression of the mouse dihydropyrimidinase-related protein 3 (DRP-3) gene during spermiogenesis. *Mol. Reprod. Dev.* 51: 105-111.
2. Nacher, J., Soriano, S., Varea, E., Molowny, A., Ponsoda, X. and Lopez-Garcia, C. 2002. CRMP-4 expression in the adult cerebral cortex and other telencephalic areas of the lizard *Podarcis hispanica*. *Brain Res. Dev. Brain Res.* 139: 285-294.
3. Seki, T. 2002. Expression patterns of immature neuronal markers PSA-NCAM, CRMP-4 and NeuroD in the hippocampus of young adult and aged rodents. *J. Neurosci. Res.* 70: 327-334.
4. Rosslenbroich, V., Dai, L., Franken, S., Gehrke, M., Junghans, U., Gieselmann, V. and Kappler, J. 2003. Subcellular localization of collapsin response mediator proteins to lipid rafts. *Biochem. Biophys. Res. Commun.* 305: 392-399.
5. Liu, P.C., Yang, Z.J., Qiu, M.H., Zhang, L.M. and Sun, F.Y. 2003. Induction of CRMP-4 in striatum of adult rat after transient brain ischemia. *Acta Pharmacol. Sin.* 24: 1205-1211.

## CHROMOSOMAL LOCATION

Genetic locus: DPYSL3 (human) mapping to 5q32; Dpysl3 (mouse) mapping to 18 B3.

## SOURCE

CRMP-4 (V-17) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of CRMP-4 of human origin.

## PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-27321 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## RESEARCH USE

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

## APPLICATIONS

CRMP-4 (V-17) is recommended for detection of CRMP-4 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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-4 (V-17) is also recommended for detection of CRMP-4 in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for CRMP-4 siRNA (h): sc-44487, CRMP-4 siRNA (m): sc-44488, CRMP-4 shRNA Plasmid (h): sc-44487-SH, CRMP-4 shRNA Plasmid (m): sc-44488-SH, CRMP-4 shRNA (h) Lentiviral Particles: sc-44487-V and CRMP-4 shRNA (m) Lentiviral Particles: sc-44488-V.

Molecular Weight of CRMP-4: 65 kDa.

Positive Controls: Jurkat whole cell lysate: sc-2204, rat brain extract: sc-2392 or SK-N-MC cell lysate: sc-2237.

## RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

## STORAGE

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

## PROTOCOLS

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

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Satisfaction  
Guaranteed

Try **CRMP (D-5): sc-377155** or **CRMP-4 (LL-5): sc-100323**, our highly recommended monoclonal alternatives to CRMP-4 (V-17).