SANTA CRUZ BIOTECHNOLOGY, INC.

CRMP-5 (h): 293T Lysate: sc-176143

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-5, which is phylogenetically divergent from the other four CRMPs, is expressed in the filopodia of growth cones as well as in adult central and peripheral neurons, including synapses. The paraneoplastic CRMP-5 autoantibody (CRMP-5-IgG) is also associated with small-cell lung carcinoma or thymoma.

REFERENCES

1. Thambisetty, M.R., et al. 2001. Paraneoplastic optic neuropathy and cerebellar ataxia with small cell carcinoma of the lung. J. Neuroophthalmol. 21: 164-167.
2. Yu, Z., et al. 2001. CRMP-5 neuronal autoantibody: marker of lung cancer and thymoma-related autoimmunity. Ann. Neurol. 49: 146-154.
3. Rosslenbroich, V., et al. 2003. Subcellular localization of collapsin response mediator proteins to lipid rafts. Biochem. Biophys. Res. Commun. 305: 392-399.
4. Cross, S.A., et al. 2003. Paraneoplastic autoimmune optic neuritis with retinitis defined by CRMP-5-IgG. Ann. Neurol. 54: 38-50.
5. Samii, A., et al. 2003. Paraneoplastic movement disorder in a patient with non-Hodgkin's lymphoma and CRMP-5 autoantibody. Mov. Disord. 18: 1556-1558.
6. 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.
7. Hotta, A., et al. 2005. Critical role of collapsin response mediator protein-associated molecule CRAM for filopodia and growth cone development in neurons. Mol. Biol. Cell 16: 32-39.

CHROMOSOMAL LOCATION

Genetic locus: DPYSL5 (human) mapping to 2p23.3.

PRODUCT

CRMP-5 (h): 293T Lysate represents a lysate of human CRMP-5 transfected 293T cells and is provided as 100 µg protein in 200 µl SDS-PAGE buffer.

STORAGE

Store at -20° C. Repeated freezing and thawing should be minimized. Sample vial should be boiled once prior to use. Non-hazardous. No MSDS required.

PROTOCOLS

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

APPLICATIONS

CRMP-5 (h): 293T Lysate is suitable as a Western Blotting positive control for human reactive CRMP-5 antibodies. Recommended use: 10-20 µl per lane.

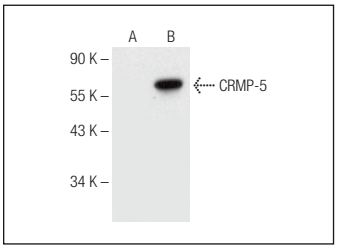
Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

CRMP-5 (C-7): sc-374320 is recommended as a positive control antibody for Western Blot analysis of enhanced human CRMP-5 expression in CRMP-5 transfected 293T cells (starting dilution 1:100, dilution range 1:100-1:1,000).

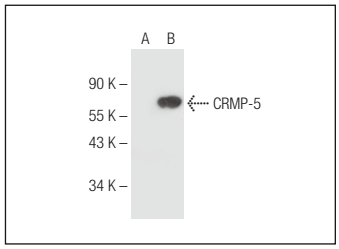
RECOMMENDED SUPPORT REAGENTS

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.

DATA



CRMP-5 (C-7): sc-374320. Western blot analysis of CRMP-5 expression in non-transfected: sc-117752 (**A**) and human CRMP-5 transfected: sc-176143 (**B**) 293T whole cell lysates.



CRMP-5 (F-4): sc-376921. Western blot analysis of CRMP-5 expression in non-transfected: sc-117752 (**A**) and human CRMP-5 transfected: sc-176143 (**B**) 293T whole cell lysates.

RESEARCH USE

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