

CRMP1

Cat.No. 336 003; Polyclonal rabbit antibody, 50 µg specific antibody (lyophilized)

Data Sheet

Reconstitution/ Storage	50 µg specific antibody, lyophilized. Affinity purified with the immunogen. Albumin was added for stabilization. For reconstitution add 50 µl H ₂ O to get a 1mg/ml solution in PBS. Then aliquot and store at -20°C to -80°C until use. Antibodies should be stored at +4°C when still lyophilized. Do not freeze! For detailed information, see back of the data sheet.
Applications	WB: 1 : 1000 (AP staining) IP: not tested yet ICC: not tested yet IHC: not tested yet IHC-P: not tested yet
Immunogen	Synthetic peptide corresponding to AA 441 to 455 from human CRMP1 (UniProt Id: Q14194)
Reactivity	Reacts with: human (Q14194), rat (Q62950), mouse (P97427). Other species not tested yet.
Specificity	Specific for CRMP 1 (isoform 1) and LCRMP 1 (isoform 2).

TO BE USED IN VITRO / FOR RESEARCH ONLY
NOT TOXIC, NOT HAZARDOUS, NOT INFECTIOUS, NOT CONTAGIOUS

Background

Collapsing response mediator proteins (**CRMPs**) are a family of five intracellular phospho-proteins implicated in signal transduction of neurite outgrowth and axonal guidance. They are differentially expressed during neuronal development.

CRMP 1, also known as DPYSL 1, DRP 1 and ULIP 3, and CRMP 2 have been shown to interact with tubulin dimers promoting microtubule assembly for neurite elongation.

Selected General References

Aberrant expression of collapsin response mediator proteins-1, -2 and -5 in the brain of intrauterine growth restricted rats. Aravidou E, Tsangaris G, Samara A, Dontas I, Botsis D, Aravidis C, Chrousos GP, Malamitsi-Puchner A International journal of developmental neuroscience : the official journal of the International Society for Developmental Neuroscience (2013) 311: 53-60. .

Down-regulation of CRMP-1 in patients with epilepsy and a rat model. Luo J, Zeng K, Zhang C, Fang M, Zhang X, Zhu Q, Wang L, Wang W, Wang X, Chen G Neurochemical research (2012) 377: 1381-91. .

The ability of LCRMP-1 to promote cancer invasion by enhancing filopodia formation is antagonized by CRMP-1. Pan SH, Chao YC, Hung PF, Chen HY, Yang SC, Chang YL, Wu CT, Chang CC, Wang WL, Chan WK, Wu YY, et al. The Journal of clinical investigation (2011) 1218: 3189-205. .

Emerging roles of collapsin response mediator proteins (CRMPs) as regulators of voltage-gated calcium channels and synaptic transmission.

Wang Y, Brittain JM, Wilson SM, Khanna R Communicative & integrative biology (2010) 32: 172-5. .

Long form collapsin response mediator protein-1 (LCRMP-1) expression is associated with clinical outcome and lymph node metastasis in non-small cell lung cancer patients.

Pan SH, Chao YC, Chen HY, Hung PF, Lin PY, Lin CW, Chang YL, Wu CT, Lee YC, Yang SC, Hong TM, et al. Lung cancer (Amsterdam, Netherlands) (2010) 671: 93-100. .

Abnormal expression of truncated CRMP-1 protein in the brain cortex of MPSIIIB mice. Cheillan D, Malleval C, Ausseil J, Vitry S, Heard JM, Maire I, Honnorat J, Belin MF, Touret M Molecular genetics and metabolism (2008) 941: 135-8. .

Mice deficient in collapsin response mediator protein-1 exhibit impaired long-term potentiation and impaired spatial learning and memory.

Su KY, Chien WL, Fu WM, Yu IS, Huang HP, Huang PH, Lin SR, Shih JY, Lin YL, Hsueh YP, Yang PC, et al. The Journal of neuroscience : the official journal of the Society for Neuroscience (2007) 2710: 2513-24. .

Collapsin response mediator protein-1: a novel invasion-suppressor gene.

Shih JY, Lee YC, Yang SC, Hong TM, Huang CY, Yang PC Clinical & experimental metastasis (2003) 201: 69-76. .

A family of rat CRMP genes is differentially expressed in the nervous system.

Wang LH, Strittmatter SM The Journal of neuroscience : the official journal of the Society for Neuroscience (1996) 1619: 6197-207. .

Access the online factsheet including applicable protocols at <https://sysy.com/product/336003> or scan the QR-code.



FAQ - How should I store my antibody?

Shipping Conditions

- All our antibodies and control proteins / peptides are shipped lyophilized (vacuum freeze-dried) and are stable in this form without loss of quality at ambient temperatures for several weeks.

Storage of Sealed Vials after Delivery

- **Unlabeled** and **biotin-labeled antibodies** and **control proteins** should be stored at 4°C before reconstitution. **They must not be stored in the freezer when still lyophilized!** Temperatures below zero may cause loss of performance.
- **Fluorescence-labeled antibodies** should be reconstituted immediately upon receipt. Long term storage (several months) may lead to aggregation.
- **Control peptides** should be kept at -20°C before reconstitution.

Long Term Storage after Reconstitution (General Considerations)

- The storage freezer must not be of the frost-free variety ("no-frost freezer"). This cycle between freezing and thawing (to reduce frost-build-up), which is exactly what should be avoided. For the same reason, antibody vials should be placed in an area of the freezer that has minimal temperature fluctuations, for instance towards the back rather than on a door shelf.
- Aliquot the antibody and store frozen (-20°C to -80°C). Avoid very small aliquots (below 20 µl) and use the smallest storage vial or tube possible. The smaller the aliquot, the more the stock concentration is affected by evaporation and adsorption of the antibody to the surface of the storage vial or tube. Adsorption of the antibody to the surface leads to a substantial loss of activity.
- The addition of glycerol to a final concentration of 50% lowers the freezing point of your stock and keeps your antibody at -20°C in liquid state. This efficiently avoids freeze and thaw cycles.

Product Specific Hints for Storage

Control proteins / peptides

- Store at -20°C to -80°C.

Monoclonal Antibodies

- **Ascites** and **hybridoma supernatant** should be stored at -20°C up to -80°C. **Prolonged storage at 4°C is not recommended!** Unlike serum, ascites may contain proteases that will degrade the antibodies.
- **Purified IgG** should be stored at -20°C up to -80°C. Adding a carrier protein like BSA will increase long term stability. Many of our antibodies already contain carrier proteins. Please refer to the data-sheet for detailed information.

Polyclonal Antibodies

- **Crude antisera:** With anti-microbials added, they may be stored at 4°C. However, frozen storage (-20°C up to -80°C) is preferable.
- **Affinity purified antibodies:** Less robust than antisera. Storage at -20°C up to -80°C is recommended. Adding a carrier protein like BSA will increase long term stability. Most of our antibodies already contain carrier proteins. Please refer to the data-sheet for detailed information.

Fluorescence-labeled Antibodies

- Store as a liquid with 1 : 1 (v/v) glycerol at -20°C. Protect these antibodies from light exposure.

Avoid repeated freeze-thaw cycles for all antibodies!

FAQ - How should I reconstitute my antibody?

Reconstitution

- All our purified antibodies are lyophilized from PBS. To reconstitute the antibody in PBS, add the amount of deionized water given in the respective datasheet. If higher volumes are preferred, add water as mentioned above and then the desired amount of PBS and a stabilizing carrier protein (e.g. BSA) to a final concentration of 2%. Some of our antibodies already contain albumin. Take this into account when adding more carrier protein. For complete reconstitution, carefully remove the lid. After adding water, briefly vortex the solution. You can spin down the liquid by placing the vial into a 50 ml centrifugation tube filled with paper.
- If desired, add small amounts of azide or thimerosal to prevent microbial growth. This is especially recommended if you want to keep an aliquot a 4°C.
- After reconstitution of fluorescence-labeled antibodies, add 1 : 1 (v/v) glycerol to a final concentration of 50%. This lowers the freezing point of your stock and keeps your antibody in liquid state at -20°C.
- Glycerol may also be added to unlabeled primary antibodies. It is a suitable way to avoid freeze-thaw cycles.
- Please refer to our **tips and hints for subsequent storage** of reconstituted antibodies and control peptides and proteins.