

Product Information

Anti-Recoverin (C-terminal)

produced in rabbit, affinity isolated antibody

Catalog Number **SAB4200309**

Product Description

Anti-Recoverin (C-terminal) is produced in rabbit using as immunogen a synthetic peptide corresponding to a sequence at the C-terminus of rat recoverin (GenelD: 140936), conjugated to KLH. The corresponding sequence is identical in mouse recoverin and highly conserved (86% sequence identity) in human recoverin. The antibody is affinity-purified using the immunizing peptide immobilized on agarose.

Anti-Recoverin (C-terminal) specifically recognizes human and rat recoverin. The antibody may be used in various immunochemical techniques including immunoblotting (~23 kDa). Detection of the recoverin band by immunoblotting is specifically inhibited by the immunizing peptide.

Recoverin (also known as RCV1, RCVRN, CAR), is a neuronal Ca^{2+} sensor (NCS) protein that plays a crucial role in phototransduction. NCS proteins are involved in a variety of Ca^{2+} -dependent signal transduction processes in neurons. Recoverin contains four EF-hand Ca^{2+} -binding sites, of which only two are capable of binding Ca^{2+} . The N-terminus of recoverin is myristoylated.¹ This modification has been suggested to function as a Ca^{2+} /myristoyl switch that modulates the localization of recoverin between the membrane and the cytoplasm. Recoverin is mainly localized in the retina, in cone and rod photoreceptors, cone bipolar cells and in a subpopulation of cells in the ganglion cell layer.² Recoverin is expressed in early stages of development, thus providing an effective marker to assess the development of photoreceptors in the retina. Recoverin serves as a Ca^{2+} -dependent regulator of GRK1/rhodopsin kinase that catalyzes the phosphorylation and desensitization of visual receptor rhodopsin.³ Recoverin has been suggested to interact with additional NCS proteins, including caldendrin, to modulate its activity.⁴ Recoverin has also been identified as an autoantigen in the degenerative disease of the retina cancer associated neuropathy (CAR). The aberrant expression of recoverin in malignant tumors has been shown to cause an autoimmune response in some cancer patients that leads to the development of praneoplastic CAR syndrome.^{5,6}

Reagent

Supplied as a solution in 0.01 M phosphate buffered saline, pH 7.4, containing 15 mM sodium azide as a preservative.

Antibody Concentration: ~1.5 mg/mL

Precautions and Disclaimer

This product is for R&D use only, not for drug, household, or other uses. Please consult the Material Safety Data Sheet for information regarding hazards and safe handling practices.

Storage/Stability

For continuous use, store at 2-8 °C for up to one month. For extended storage, freeze in working aliquots. Repeated freezing and thawing, or storage in "frost-free" freezers, is not recommended. If slight turbidity occurs upon prolonged storage, clarify the solution by centrifugation before use. Working dilutions should be discarded if not used within 12 hours.

Product Profile

Immunoblotting: a working concentration of 1.5-3.0 $\mu\text{g}/\text{mL}$ is recommended using rat brain extracts (S1 fraction) and SH-SY5Y cell extracts.

Note: In order to obtain the best results using various techniques and preparations, we recommend determining the optimal working dilutions by titration.

References

1. Senin, I.I., et al., *J. Mol. Biol.*, **330**, 409-418 (2003).
2. Günhan, E., et al., *J. Neurosci.*, **23**, 1383-1389 (2003).
3. Komolov, K.E., et al., *J. Neurochem.*, **110**, 72-79 (2009).
4. Fries, R., et al., *J. Neurochem.*, **113**, 1150-1162 (2010).
5. Ohguro, H., and Nakazawa, M., *Adv. Exp. Med. Biol.*, **514**, 109-124 (2002).
6. Kobayashi, M., et al., *Lung Cancer*, **56**, 319-326 (2007).

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