

Product Information

Monoclonal Anti-Ryanodine Receptor, clone 34C

produced in mouse, ascites fluid

Catalog Number **R129**

Product Description

Monoclonal Anti-Ryanodine Receptor (IgG1 isotype) is derived from the 34C hybridoma produced by the fusion of P3X 63 Ag8.653 myeloma cells and spleen cells from Balb/c mice. Partially purified chicken pectoral muscle ryanodine receptor was used as immunogen.

Monoclonal Anti-Ryanodine Receptor reacts strongly with ryanodine receptor-1 (expressed predominantly in skeletal muscle and areas of the brain; also known as the α isoform) and receptor-2 (expressed predominantly in the heart muscle, but also found in stomach, endothelial cells and diffuse areas of the brain; also known as the β isoform). It reacts with ryanodine receptor in human, non-human primates, bovine, sheep, canine, rat, mouse, mink and rabbit. Also reacts with the α , β , and cardiac (ryanodine receptor-3) isoforms in chickens; with the α and β isoforms in frog; and with the α isoform in fish. In immunoblotting, it detects a 565 kDa band. In non-mammalian vertebrates, a doublet is seen at 565 kDa representing the α and β isoforms.

In immuno-histochemistry, it localizes the sarcoplasmic/endoplasmic reticulum calcium pump (SERCA) in rat brain.

The ryanodine receptor (RyR) is the channel responsible for the release of Ca^{2+} from the sarcoplasmic reticulum (SR) in muscle cells and also plays a role in Ca^{2+} regulation in non-muscle cells. The RyR exists as a homotetramer and is predicted to have a short cytoplasmic C-terminus and 4-10 transmembrane domains; the remainder of the protein, termed the "foot" region is located in the cytoplasm between the T-tubule and the SR.

The mammalian RyR is the product of three different genes: RyR-1, which is expressed predominantly in skeletal muscle and areas of the brain, RyR-2, which is expressed predominantly in the heart muscle but also found in the stomach, endothelial cells and diffuse

areas of the brain, and RyR-3 which is found in smooth muscle and the brain (striatum, thalamus and hippocampus).

Reagent

Supplied as purified IgG1 antibody containing 0.05% sodium azide.

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 to 8 °C for up to one month. For extended storage, solution may be frozen in working aliquots. Storage in "frost-free" freezers, or repeated freezing and thawing, is not recommended. If slight turbidity occurs upon prolonged storage, clarify by centrifugation before use.

Product Profile

Recommended working dilutions:

Immunoblotting: 1:5,000

Immunohistochemistry: 1:1,000

Immunofluorescence; assay dependent

Note: In order to obtain best results, it is recommended that each individual user determine their working dilution by titration assay.

References

1. Ouyang, Y. et al. *Brain Res.* **620**, 269-280 (1993).
2. Walton, P.D. et al. *J. Cell Biol.* **113**, 1145-1157 (1991).
3. Olivares, E.B. et al. *Biophys. J.* **59**, 1153-1163 (1991).
4. Airey, J.A. *J. Biol. Chem.* **265**, 14187-14194 (1990).

BR,PHC 10/10-1