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ProductInformation

Monoclonal Anti-PMCA4
Clone JA9
Purified Mouse Immunoglobulin

Product Number **P 1494**
Storage Temperature –20 °C

Product Description

Monoclonal Anti-PMCA4 (plasma membrane calcium ATPase 4) is derived from the hybridoma produced by the fusion of mouse myeloma cells and splenocytes from a mouse immunized with purified human erythrocyte PMCA.

Monoclonal Anti-PMCA4 recognizes PMCA4 from human and rat tissues. This antibody is specific to PMCA4 but reacts with both PMCA4a (133 kDa) and PMCA4b (129 kDa) splice variants. This antibody detects PMCA4 by immunoblotting, immunohistochemistry, and ELISA. The epitope for this antibody has been mapped to amino acids 51-75 of PMCA4, a conserved region within both PMCA4a and PMCA4b.

The Ca^{2+} pump of the plasma membrane, termed plasma membrane calcium ATPase (PMCA), pumps Ca^{2+} from the cytosol to the extracellular space. This integral membrane protein is conserved throughout evolution and related to a number of other ATPases including the sarcoplasmic reticulum calcium ATPase (SERCA) and the Na^{+}/K^{+} ATPase. These membrane proteins are characterized by a large intracellular catalytic domain and a smaller C-terminal domain that serves to regulate the activity of the pump.[1]

Studies indicate that there are 20 known isoforms of the PMCA, encoded by a four-member gene family.[2]

Reagent

Monoclonal Anti-PMCA4 (IgG1) is supplied as 100 µg of purified immunoglobulin at 1 mg/ml in phosphate buffered saline containing 1 mg/ml bovine serum albumin and 0.05 % sodium azide.

Precautions and Disclaimer

Due to the sodium azide content, a material safety data sheet (MSDS) for this product has been sent to the attention of the safety officer of your institution. Consult the MSDS for information regarding hazards and safe handling procedures.

Storage/Stability

Store at –20 °C. For extended storage, freeze in working aliquots. Repeated freezing and thawing is not recommended. Storage in “frost-free” freezers is not recommended. If slight turbidity occurs upon prolonged storage, clarify the solution by centrifugation before use. Working dilution samples should be discarded in not used within 12 hours.

Product Profile

The recommended dilution is 1 to 1000 for immunoblotting, and 1 to 15,000 for ELISA.

Note: In order to obtain best results and assay sensitivities of different techniques and preparations, we recommend determining optimal working conditions by titration test.

References

1. Carafoli, E., Basic Res. Cardiol., 92, 59-61 (1997).
2. Stauffer, T.P. et al., J. Biol. Chem., 270, 12184-12190 (1995).

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