



Product Information

MONOCLONAL ANTI-SERCA2 ATPASE

Clone 2A7-A1

Mouse Ascites Fluid

Product Number **S 1314**

Product Description

Monoclonal Anti-SERCA2 ATPase is derived from the hybridoma produced by the fusion of mouse myeloma cells and splenocytes from a BALB/c mouse immunized with purified dog cardiac sarcoplasmic reticulum vesicles.¹

Monoclonal Anti-SERCA2 ATPase recognizes the SERCA2a ATPase (110 kDa) in type I (slow) skeletal muscle and cardiac muscle of human, dog, rabbit, rat, mouse and guinea pig by immunoblotting and immunoprecipitation. This antibody does not cross-react with the SERCA1 ATPase enzyme.

ATP dependent calcium pumps are responsible in part for the maintenance of low cytoplasmic free Ca^{2+} concentrations.² The ATP pumps that reside in intracellular organelles are encoded by a family of genes that produce structurally related enzymes termed the sarcoplasmic or endoplasmic reticulum Ca^{2+} (SERCA) ATPases.^{3,4} The SERCA1 gene is exclusively expressed in type II (fast) skeletal muscle. The SERCA2 gene is subject to tissue dependent processing resulting in the generation of the SERCA2a muscle-specific isoform expressed in type I (slow) skeletal, cardiac and smooth muscle and the SERCA2b isoform expressed in all other cell types. SERCA3 is co-expressed with SERCA2b in platelets, mast cells, lymphoid cells and epithelial cells.

Reagent

Monoclonal Anti-SERCA2 ATPase is supplied as 100 μl of diluted ascites fluid in phosphate buffered saline with 0.05 % sodium azide as preservative.

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 hazardous and safe handling.

Storage/Stability

Store at $-20\text{ }^{\circ}\text{C}$. 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 if not used within 12 hours.

Product Profile

The recommended working dilution is 1:1000 for immunoblotting.

The working concentration for immunoprecipitation is assay dependent.

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

References

1. Movsesian, M.A. et al., *Circulation*, **90**, 653-657 (1994).
2. MacLennan, D.H., *Eur. J. Biochem.*, **267**, 5291-5297 (2000).
3. East, J.M., *Mol. Membr. Biol.*, **17**, 189-200 (2000).
4. Shull, G.E., *Eur. J. Biochem.*, **267**, 5284-5290 (2000).

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