



## Product Information

### ANTI-SERCA3 ATPASE

Developed in Rabbit  
Affinity Isolated Antibody

Product Number **S 1564**

#### Product Description

Anti-SERCA3 ATPase is developed in rabbit using a highly-purified synthetic peptide corresponding to amino acids 29-39 (VTDARERYGPN) of rat, mouse and human SERCA3 ATPase conjugated to KLH as the immunogen. This sequence differs from the human sequence at position 31 (D replaces G). The antibody is affinity isolated on immobilized immunogen.

Anti-SERCA3 ATPase recognizes overexpressed recombinant rat and human SERCA3 ATPase (97 kDa) by immunoblotting. This antibody does not cross-react with other SERCA ATPase isoforms.

ATP dependent calcium pumps are responsible in part for the maintenance of low cytoplasmic free  $\text{Ca}^{2+}$  concentrations.<sup>1</sup> 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  $\text{Ca}^{2+}$  (SERCA) ATPases.<sup>2,3</sup> 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

Anti-SERCA3 ATPase is supplied as affinity isolated antibody in phosphate buffered saline containing 1.0 mg/ml bovine serum albumin and 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  $-20^{\circ}\text{C}$ . 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 1:500 for immunoblotting.

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. MacLennan, D.H., Eur. J. Biochem., **267**, 5291-5297 (2000).
2. East, J.M., Mol. Membr. Biol., **17**, 189-200 (2000).
3. Shull, G.E., Eur. J. Biochem., **267**, 5284-5290 (2000).

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