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## A010-20 anti-SERCA2a antibody 20 $\mu$ l

**Background:** SERCA2a is a Ca<sup>2+</sup>-pump located in the sarcoplasmic reticulum of cardiac and slow-twitch skeletal muscle. The enzyme transports Ca<sup>2+</sup> from the cytoplasm into the SR using the hydrolysis of ATP as the energy source for this reaction. Two Ca<sup>2+</sup> are transported for each ATP hydrolysed. This Ca<sup>2+</sup>-transport is the principal means of muscle relaxation in cardiac and slow-twitch skeletal muscle. The activity of SERCA2a is moderated by its interaction with phospholamban. SERCA2a is one isoform of SERCA2: this isoform differs from SERCA2b at the extreme carboxy terminus only. Antibody A010-20 recognises the C-terminal sequence which distinguishes SERCA2a from SERCA2b.

**Description:** Lyophilised rabbit polyclonal serum containing IgG antibody specific to SERCA2a. Standard 20 $\mu$ l pack is Sufficient for 100ml Western blotting at a working dilution of 1:5000.

**Immunogen:** Synthetic peptide (C-LEPAILE<sub>997</sub>) corresponding to amino acids at the extreme C-terminus of SERCA2a.

**Specificity and Species Cross Reactivity:** The antibody recognises SERCA2a and binding is blocked in the presence of a peptide containing the epitope. The antibody reacts with SERCA2a from human, rat, mouse, rabbit, canine, and bovine species.

**Applications:** Western blot (1:5000 dilution)

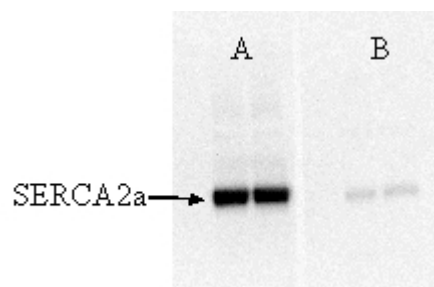
**Storage:** Store antibody desiccated at 4C when dry, and frozen (-20C or -80C) in small aliquots when reconstituted with 20 $\mu$ l deionised water.

### Epitope sequence alignment SERCA (991-997)

Epitope	C-LEPAILE
Human	LEPAILE
Cat	LEPAILE
Chicken	LEPAILE
Cow	LEPAILE
Dog	LEPAILE
Mouse	LEPAILE
Pig	LEPAILE
Rabbit	LEPAILE
Rat	LEPAILE

### references:

Colyer, J., & Wang J.H. (1991) *J. Biol. Chem.* 266, 17486-17493



**Figure 1: Detection of SERCA2a in rat cardiac SR** 10 $\mu$ g SR proteins were electrophoresed through 6% SDS-PAGE gels and transferred to PVDF membrane. SERCA was detected using 1:5000 dilution of anti-SERCA2a antibody (A010-20), with peroxidase based ECL-detection (panel A). 1 $\mu$ M epitope peptide (P010-20) substantially reduced immunodetection of SERCA (panel B), 10 $\mu$ M completely inhibited binding (data not shown).