

## SERCA2a pAb protein

### Quality Control Certificate of Analysis

Catalogue No.:A010-23AP

Unit Size: 100 µg

Lot No: A642226

**Background:** SERCA2a is a  $\text{Ca}^{2+}$  pump located in the sarcoplasmic reticulum of cardiac and slow-twitch skeletal muscle. The enzyme transports  $\text{Ca}^{2+}$  from the cytoplasm into the SR using the hydrolysis of ATP as the energy source for this reaction. Two  $\text{Ca}^{2+}$  are transported for each ATP hydrolysed. This  $\text{Ca}^{2+}$  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 and SERCA2c at the extreme carboxy terminus only. Antibody A010-23L recognises the C-terminal sequence which distinguishes SERCA2a from SERCA2b and SERCA2c (Dally *et al.*, 2006).

**Description:** Lyophilised **Rabbit** polyclonal antibody protein (IgG): containing IgG antibody specific to SERCA2a

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

**Antibody Isotype:** IgG.

**Antibody Purity:** protein A purified protein.

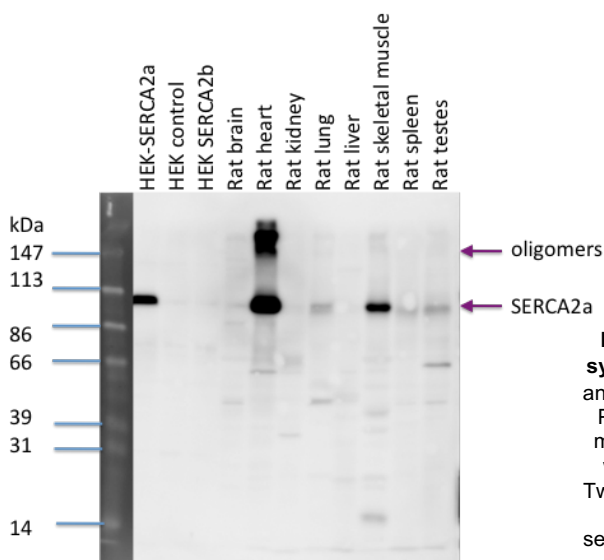
**Vial Constituents:** Lyophilised rabbit antibody IgG with sugar/chemical polymer stabiliser (20% by volume)

**Specificity:** The antibody recognises SERCA2a in recombinant, tissue and cellular samples. The antibody reacts with SERCA2a in all mammalian species as the sequence of the epitope is identical in all mammalian species (including human, rat, mouse, rabbit, sheep, pig, dog).

**Storage Instructions:** Lyophilised antibody is stable at 4°C when stored with desiccant. Reconstitute lyophilised powder in 100 µl of 18 MΩ H<sub>2</sub>O, aliquot and store frozen at -80°C for 1 year. Avoid freeze - thaw cycles.

**Tested Applications:** WB 1:2,000

Epitope	990
Human	C L E P A I L E
Mouse	- L E P A I L E
Rat	- L E P A I L E
Rabbit	- L E P A I L E
Dog	- L E P A I L E
Chicken	- L E P A I L E
Cow	- L E P A I L E



**Figure 1: Recognition of SERCA2a in recombinant systems and rat tissue extracts.** 2µg HEK microsomes and 20µg rat tissue homogenates were separated by SDS-PAGE in 10% gels. Proteins were transferred to PVDF membrane and SERCA2a identified by western blotting with A010-23L (lot 0214-02) 1:20,000 dilution in TBS-Tween20-5% milk protein (6 hour at RT). Immunoreactive proteins were visualised with peroxidase labelled secondary antibody and enhanced chemiluminescence. 1 minute exposure.

### Related Products:

SERCA2a (A010-20), SERCA2b (A010-24S, A010-24L), SERCA1/2 Y/IF4 Antibody (A010-21AP), SERCA1 B/4H3 Antibody (A010-22AP)

### Background References:

Colyer, J., & Wang J.H. (1991) *J. Biol. Chem.* 266, 17486-17493  
Dally, S. et al. (2006) *Biochem. J.* 395, 249-258