

SERCA mAb (clone B/4H3)

Quality Control Certificate of Analysis

Catalogue No.: A010-22AP

Unit Size: 50 µl

Lot No.: 0911-02

SERCA1 is the Ca²⁺-pump (109kDa) located in the sarcoplasmic reticulum (SR) of fast-twitch skeletal muscle. The enzyme transports 2 Ca²⁺ from the cytoplasm into the SR using the hydrolysis of 1 molecule of ATP to power the reaction. This terminates muscle contraction and promotes muscle relaxation. Mutations in the SERCA1 gene (ATP2A1) are observed in some patients with Brody disease, an exercise induced impairment in muscle relaxation, stiffness and cramps (Odermatt et al., 1999; Vattermi et al., 2010). The monoclonal antibody B/4H3 was produced by immunizing mice with purified SERCA1: the antibody inhibits SERCA1 activity upon binding (Colyer et al., 1989).

Description: Affinity purified Mouse monoclonal antibody (A010-22AP) to SERCA1

Immunogen: Purified SERCA1a. Epitope was mapped to residues 662-666

Antibody Isotype: IgG1.

Antibody Purity: Protein A affinity purified.

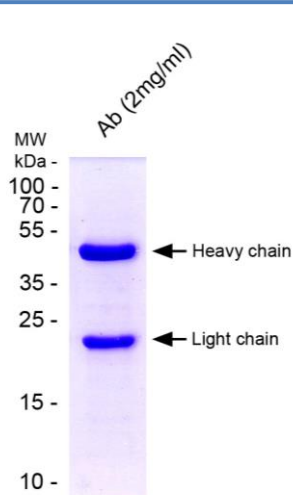
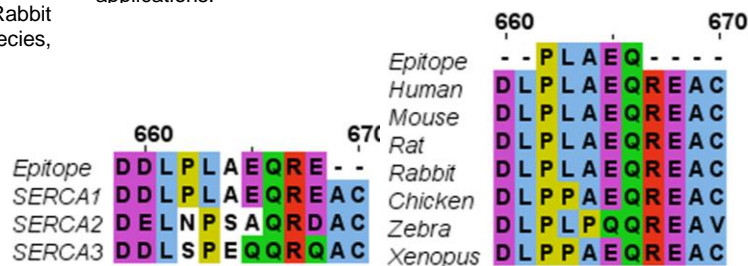
Species Cross Reactivity: Antibody tested on Rat and Rabbit tissue, but immunogenic peptide aligns with Mammalian species, Avian, Amphibian and Fish

Specificity: Antibody will detect the SERCA1 isoform only

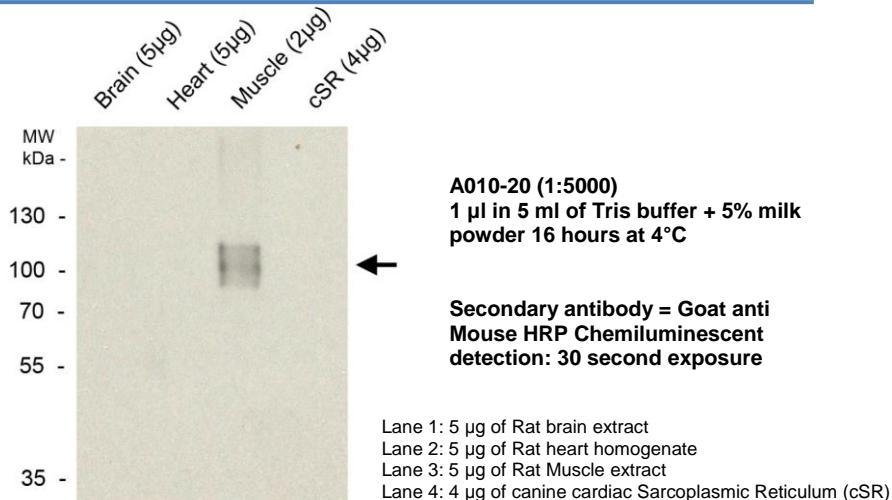
Vial Constituents: Lyophilised affinity purified A010-22AP Ab (50 µl) in 0.1M Tris-citrate pH 7.4 with 20%v/v stabiliser solution.

Storage Instructions: Lyophilised antibody is stable at 4°C when stored with desiccant. Reconstitute lyophilised powder in 50 µl of 18 MΩ H₂O, aliquot and store frozen at -80°C for 1 year. Avoid freeze - thaw cycles.

Tested Applications: WB 1:5000. Not yet tested in other applications.



12% SDS-PAGE gel showing 10 µl of purified A010-22AP



WB using 1:5000 SERCA B/4H3 Ab (A010-22AP) against rat brain, heart and muscle tissue extracts and canine cardiac Sarcoplasmic Reticulum. SERCA B/4H3 Ab recognises the 109 kDa muscle isoform SERCA1 but not the 115 kDa cardiac isoform SERCA2 7.5 % gel PVDF membrane

Related Products: SERCA2a Anti-Serum (A010-20), SERCA Y/I4FAntibody (A010-21AP)

References:

- J Colyer, A M Mata, A G Lee, and J M East (1989) Biochem J. 262, 439-447.
- Odermatt A, Taschner PE, Khanna VK, Busch HF, Karpati G, Jablecki CK, Breuning MH, MacLennan DH. (1999) Nat.Genetics 14, 191-
- Vattermi G, Gualandi F, Oosterhof A, Marini M, Tonin P, Rimessi P, Neri M, Guglielmi V, Russignan A, Poli C, van Kuppevelt TH, Ferlini A, Tomelleri G. (2010) J Neuropathol Exp Neurol. 69, 246-52