



Badrilla

SERCA2 Phospho-Ser38 Positive Control

Quality Control Certificate of Analysis

Catalogue No.: C010-25

Unit Size: 100 µl

Lot No.: 1009-07

Background: Due to the ambiguity surrounding the phosphorylation status of the serine residue at position 38 of SERCA2, a positive control has been produced for the anti-SERCA2 phospho-Ser38 antibody. This positive control consists of a single synthetic phospho-peptide, which corresponds to what would be the phospho-Ser38 epitope of SERCA2, covalently conjugated to a single scaffold protein (Rodriguez *et al.*, 2004). Because of the uncertain nature of SERCA2-Ser38 phosphorylation, this positive control is required in order to confirm a phosphorylation of SERCA2-Ser38 in native samples.

Description: SERCA2 phospho-Ser38 positive control.

Epitope Peptide Sequence Conjugated to Scaffold:
K₃₁LKERWGS(PO3H2)NEL₄₁

Scaffold: Concatenated and modified protein designated (I27)₅ derived from the giant muscle protein titin (Rodriguez *et al.*, 2004).

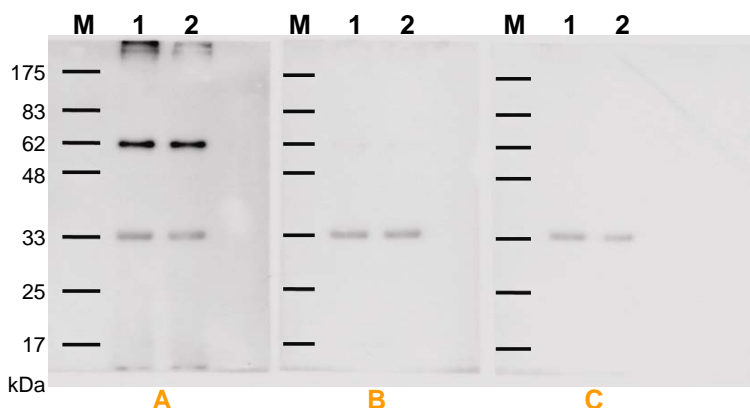
Vial Constituents: 100 µl of lyophilised positive control protein.

Storage Instructions: Lyophilised protein is stable at 4 °C when stored with desiccant. Reconstitute lyophilised powder in 100 µl of sample buffer (Laemmli, 1970), aliquot and store frozen at -80 °C for 1 year. Avoid freeze – thaw cycles.

Tested Applications: Western blot. Not yet tested in other applications; therefore, optimal dilutions/concentrations should be determined by the user.

Recommended Sample Load: 10 µl. **Boil sample for 5 minutes prior to loading.**

Specificity: The positive control is specifically recognised by the anti-SERCA2a phospho-Ser38 antibody. The positive control protein also contains a (His)₆ tag and calmodulin (CBP) tag, and therefore, may also be recognised by an anti-(His)₆ and/or anti-calmodulin (CBP) tag antibody.



Western blots showing the detection of SERCA2 phospho-Ser38 in the positive control protein.

M = MW markers in kDa.

Lanes 1 & 2 = 10 µl of positive control.

Panel **A** = Antibody used at a 1 in 5000 dilution.

Panel **B** = Antibody used at a 1 in 5000 dilution + competing epitope peptide at 1 µM.

Panel **C** = Antibody used at a 1 in 5000 dilution + competing epitope peptide at 10 µM.

12% SDS-PAGE gel to PVDF membrane. Secondary antibody = Goat anti-rabbit-HRP. Chemiluminescent detection: western blot exposure time = 30 seconds. SERCA2 phospho-Ser38 positive control at ~ 62 kDa; non-specific secondary antibody binding at ~ 33 kDa.

Related Products: Anti-SERCA2 phospho-SER38 antibody (A010-25). SERCA2 phospho-Ser38 epitope peptide (P010-25).

References:

- Laemmli, U. K. (1970): *Nature* **227**, 680-5.
- Rodriguez, P., Jackson, W. A., and Colyer, J. (2004): *J Biol Chem* **279**, 17111-9.