

ATP2A2/SERCA2 Antibody

100 µl
(10 Western mini-blot)

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This product is for *in vitro* research use only and is not intended for use in humans or animals.
This product is not intended for use as a therapeutic or in diagnostic procedures.

| Applications | Species Cross-Reactivity* | Molecular Wt. | Source |
|---------------------|---------------------------|---------------|----------|
| W, IP Endogenous | H, M, R, Mk | 114, 140 kDa | Rabbit** |

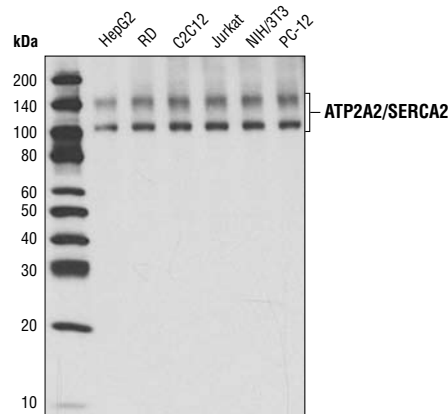
Background: The ATP2A2 (SERCA2) calcium pump is one of several sarcoplasmic and endoplasmic reticulum Ca²⁺-ATPases responsible for regulating calcium transport across intracellular membranes (1). Multiple isoforms have been isolated, with ATP2A2a (SERCA2a) found predominantly in the sarcoplasmic reticulum of muscle cells and ATP2A2b (SERCA2b) more ubiquitously expressed and is found in the endoplasmic reticulum of most cell types (2). An isoform containing a truncated carboxy region (ATP2A2c) is expressed in epithelial and hematopoietic cell lines and may be involved in monocyte differentiation (3). Post-translational modification of ATP2A2 (SERCA2), including phosphorylation and tyrosine nitration, modify Ca²⁺-ATPase activity and calcium transport (4,5). Mutation in the corresponding ATP2A2 (SERCA2) gene results in Darier disease, a skin disorder characterized by the presence of dark, keratotic papules or rash found on the head and torso (6).

Specificity/Sensitivity: ATP2A2/SERCA2 Antibody detects endogenous levels of total ATP2A2/SERCA2 protein.

Source/Purification: Polyclonal antibodies are produced by immunizing animals with a synthetic peptide (KLH-coupled) derived from a sequence around Leu32 of human ATP2A2/SERCA2. Antibodies are purified by protein A and peptide affinity chromatography.

Background References:

- (1) Vangheluwe, P. et al. (2005) *Cell Calcium* 38, 291–302.
- (2) de Smedt, H. et al. (1991) *J Biol Chem* 266, 7092–5.
- (3) Gélébart, P. et al. (2003) *Biochem Biophys Res Commun* 303, 676–84.
- (4) Hawkins, C. et al. (1995) *Mol Cell Biochem* 142, 131–8.
- (5) Viner, R.I. et al. (1999) *Biochem J* 340 (Pt 3), 657–69.
- (6) Sakuntabhai, A. et al. (1999) *Hum Mol Genet* 8, 1611–9.



Western blot analysis of extracts from various cell types using ATP2A2/SERCA2 Antibody.

Entrez-Gene ID #488
Swiss-Prot Acc. #P16615

Storage: Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA and 50% glycerol. Store at -20°C.
Do not aliquot the antibody.

*Species cross-reactivity is determined by western blot.

**Anti-rabbit secondary antibodies must be used to detect this antibody.

Recommended Antibody Dilutions:

| | |
|---------------------|--------|
| Western blotting | 1:1000 |
| Immunoprecipitation | 1:50 |

For application specific protocols please see the web page for this product at www.cellsignal.com.

Please visit www.cellsignal.com for a complete listing of recommended companion products.

IMPORTANT: For western blots, incubate membrane with diluted antibody in 5% w/v BSA, 1X TBS, 0.1% Tween-20 at 4°C with gentle shaking, overnight.

Applications Key: W—Western IP—Immunoprecipitation IHC—Immunohistochemistry ChIP—Chromatin Immunoprecipitation IF—Immunofluorescence F—Flow cytometry E-P—ELISA-Peptide

Species Cross-Reactivity Key: H—human M—mouse R—rat Hm—hamster Mk—monkey Mi—mink C—chicken Dm—D. melanogaster X—Xenopus Z—zebrafish B—bovine

Dg—dog Pg—pig Sc—S. cerevisiae All—all species expected Species enclosed in parentheses are predicted to react based on 100% homology.