



**Orders:** 877-616-CELL (2355)  
orders@cellsignal.com

**Support:** 877-678-TECH (8324)

**Web:** info@cellsignal.com  
cellsignal.com

3 Trask Lane | Danvers | Massachusetts | 01923 | USA

Store at -20C  
#4388

## ATP2A2/SERCA2 Antibody

For Research Use Only. Not for Use in Diagnostic Procedures.

<b>Applications:</b> W	<b>Reactivity:</b> H M R Mk	<b>Sensitivity:</b> Endogenous	<b>MW (kDa):</b> 114, 140	<b>Source/Isotype:</b> Rabbit	<b>UniProt ID:</b> #P16615	<b>Entrez-Gene Id:</b> 488
---------------------------	--------------------------------	-----------------------------------	------------------------------	----------------------------------	-------------------------------	-------------------------------

### Product Usage Information

#### Application

Western Blotting

#### Dilution

1:1000

### 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.

### 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 corresponding to a sequence around Leu32 of human ATP2A2/SERCA2. Antibodies are purified by protein A and peptide affinity chromatography.

### Background

The ATP2A2 (SERCA2) calcium pump is one of several sarcoplasmic and endoplasmic reticulum Ca<sup>2+</sup>-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 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 Ca<sup>2+</sup>-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).

### Background References

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

### Species Reactivity

Species reactivity is determined by testing in at least one approved application (e.g., western blot).

### Western Blot Buffer

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

### Applications Key

**W:** Western Blotting

### Cross-Reactivity Key

**H:** Human **M:** Mouse **R:** Rat **Mk:** Monkey

### Trademarks and Patents

Cell Signaling Technology is a trademark of Cell Signaling Technology, Inc.

All other trademarks are the property of their respective owners. Visit [cellsignal.com/trademarks](http://cellsignal.com/trademarks) for more information.

### Limited Uses

Except as otherwise expressly agreed in a writing signed by a legally authorized representative of CST, the following terms apply to Products provided by CST, its affiliates or its distributors. Any Customer's terms and conditions that are in addition to, or different from, those contained herein, unless separately accepted in writing by a legally authorized representative of CST, are rejected and are of no force or effect.

Products are labeled with For Research Use Only or a similar labeling statement and have not been approved, cleared, or licensed by the FDA or other regulatory foreign or domestic entity, for any purpose. Customer shall not use any Product for any diagnostic or therapeutic purpose, or otherwise in

any manner that conflicts with its labeling statement. Products sold or licensed by CST are provided for Customer as the end-user and solely for research and development uses. Any use of Product for diagnostic, prophylactic or therapeutic purposes, or any purchase of Product for resale (alone or as a component) or other commercial purpose, requires a separate license from CST. Customer shall (a) not sell, license, loan, donate or otherwise transfer or make available any Product to any third party, whether alone or in combination with other materials, or use the Products to manufacture any commercial products, (b) not copy, modify, reverse engineer, decompile, disassemble or otherwise attempt to discover the underlying structure or technology of the Products, or use the Products for the purpose of developing any products or services that would compete with CST products or services, (c) not alter or remove from the Products any trademarks, trade names, logos, patent or copyright notices or markings, (d) use the Products solely in accordance with CST Product Terms of Sale and any applicable documentation, and (e) comply with any license, terms of service or similar agreement with respect to any third party products or services used by Customer in connection with the Products.