Revision 1

#9580 Store at -20C

ATP2A2/SERCA2 (D51B11) Rabbit mAb

Cell Signaling TECHNOLOGY®

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

Applications:	Reactivity:	Sensitivity:	MW (kDa):	Source/Isotype:	UniProt ID:	Entrez-Gene Id:
WB, IF-IC	H M R Mk	Endogenous	114, 140	Rabbit IgG	#P16615	488

Product Usage Information

Application	Dilution
Western Blotting	1:1000
Immunofluorescence (Immunocytochemistry)	1:50 - 1:100

Storage

Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA, 50% glycerol and less than 0.02% sodium azide. Store at –20°C. Do not aliquot the antibody.

Specificity / Sensitivity

ATP2A2/SERCA2 (D51B11) Rabbit mAb detects endogenous levels of total ATP2A2/SERCA2 protein.

Source / Purification

Monoclonal antibody is produced by immunizing animals with a synthetic peptide corresponding to residues near the amino terminus of human ATP2A2/SERCA2 protein.

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 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).

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.

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 nonfat dry milk, 1X TBS, 0.1% Tween® 20 at 4°C with gentle shaking, overnight.

Applications Key

WB: Western Blotting **IF-IC:** Immunofluorescence (Immunocytochemistry)

Cross-Reactivity Key

H: human **M:** mouse **R:** rat **Hm:** hamster **Mk:** monkey **Vir:** virus **Mi:** mink **C:** chicken **Dm:** D. melanogaster **X:** Xenopus **Z:** zebrafish **B:** bovine **Dg:** dog **Pg:** pig **Sc:** S. cerevisiae **Ce:** C. elegans **Hr:** horse **GP:** Guinea Pig **Rab:** rabbit **All:** all species expected

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Limited Uses

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