

#12293 Store at -20°C

## ATP2A1/SERCA1 (D54G12) Rabbit mAb



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Applications: WB	Reactivity: H M	Sensitivity: Endogenous	MW (kDa): 100	Source/Isotype: Rabbit IgG	UniProt ID: #O14983	Entrez-Gene Id: 487
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### 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, 50% glycerol and less than 0.02% sodium azide. Store at -20°C. Do not aliquot the antibody.

### Specificity / Sensitivity

ATP2A1/SERCA1 (D54G12) Rabbit mAb recognizes endogenous levels of total ATP2A1/SERCA1 protein.

### Species predicted to react based on 100% sequence homology:

Rat

### Source / Purification

Monoclonal antibody is produced by immunizing animals with a synthetic peptide corresponding to residues surrounding Pro995 of human ATP2A1/SERCA1 protein.

### Background

Sarcoplasmic and endoplasmic reticulum Ca<sup>2+</sup> ATPases (SERCA) are members of a highly conserved family of Ca<sup>2+</sup> pumps (1). SERCA pumps transport Ca<sup>2+</sup> from the cytosol to the sarcoplasmic and endoplasmic reticulum lumen against a large concentration gradient (1). ATP2A1 (SERCA1) is a fast-twitch, skeletal muscle sarcoplasmic reticulum Ca<sup>2+</sup> ATPase (2). Research studies have shown that mutations in the ATP2A1 gene cause an autosomal recessive muscle disorder known as Brody myopathy, which is characterized by muscle cramping and impaired muscle relaxation associated with exercise (1-3).

### Background References

- Hovnanian, A. (2007) *Subcell Biochem* 45, 337-63.
- Odermatt, A. et al. (1996) *Nat Genet* 14, 191-4.
- Odermatt, A. et al. (2000) *Hum Genet* 106, 482-91.

### 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

### 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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