

# Product Datasheet

## SERCA2 ATPase Antibody (2A7-A1) NB300-581-10uL

Unit Size: 10 uL

Store at -20C. Avoid freeze-thaw cycles.

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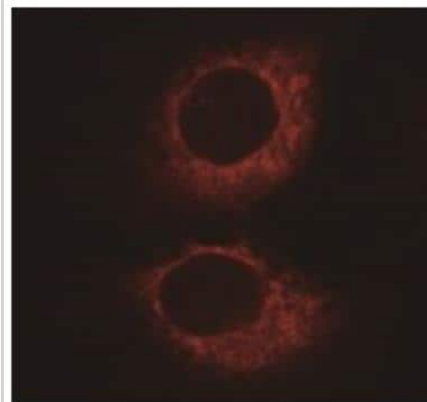
**NB300-581-10uL****SERCA2 ATPase Antibody (2A7-A1)**

<b>Product Information</b>	
<b>Unit Size</b>	10 uL
<b>Concentration</b>	This product is unpurified. The exact concentration of antibody is not quantifiable.
<b>Storage</b>	Store at -20C. Avoid freeze-thaw cycles.
<b>Clonality</b>	Monoclonal
<b>Clone</b>	2A7-A1
<b>Preservative</b>	0.05% Sodium Azide
<b>Isotype</b>	IgG2a
<b>Purity</b>	Unpurified
<b>Buffer</b>	Ascites
<b>Product Description</b>	
<b>Host</b>	Mouse
<b>Gene ID</b>	488
<b>Gene Symbol</b>	ATP2A2
<b>Species</b>	Human, Mouse, Rat, Porcine, Amphibian, Canine, Guinea Pig, Rabbit, Sheep
<b>Reactivity Notes</b>	Sheep reactivity reported in scientific literature (PMID: 21289077). Amphibian reactivity reported in scientific literature (PMID: 12022876). Please note that this antibody is reactive to Mouse and derived from the same host, Mouse. Additional Mouse on Mouse blocking steps may be required for IHC and ICC experiments. Please contact Technical Support for more information.
<b>Specificity/Sensitivity</b>	Detects sarcoplasmic or endoplasmic reticulum calcium (SERCA) 2 ATPase. NB300-581 recognizes the SERCA2a and SERCA2b isoforms identically. However, the antibody does not recognize the skeletal muscle (SERCA1) or housekeeping isoforms (SERCA3).
<b>Immunogen</b>	Purified canine cardiac sarcoplasmic reticulum vesicles.
<b>Product Application Details</b>	
<b>Applications</b>	Western Blot, Flow Cytometry, Immunocytochemistry/ Immunofluorescence, Immunohistochemistry, Immunohistochemistry-Frozen, Immunohistochemistry-Paraffin, Immunoprecipitation
<b>Recommended Dilutions</b>	Western Blot 1:1000, Flow Cytometry 1 ug / 10 <sup>6</sup> cells, Immunohistochemistry 1:100, Immunocytochemistry/ Immunofluorescence 1:10 - 1:500, Immunoprecipitation 1:10 - 1:500, Immunohistochemistry-Paraffin 1 ug/mL, Immunohistochemistry-Frozen 1:100
<b>Application Notes</b>	WB: Detects an approx. 110 kDa protein representing SERCA2 ATPase in rat cardiac tissue.

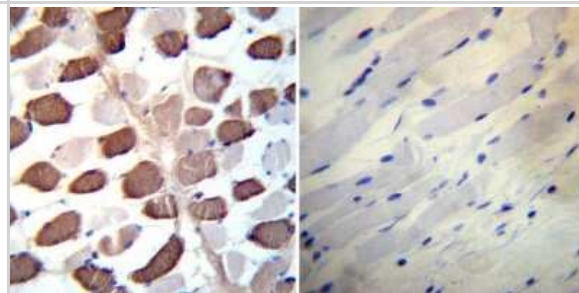


## Images

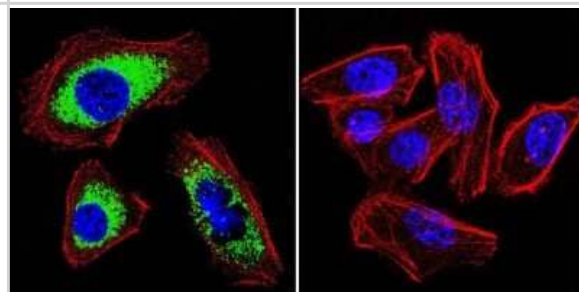
Immunocytochemistry/Immunofluorescence: SERCA2 ATPase Antibody (2A7-A1) [NB300-581] - HeLa cells. Primary antibody at 1:100, secondary antibody: goat-anti mouse IgG AlexaFluor 568 at 1:100. ICC/IF image submitted by a verified customer review.



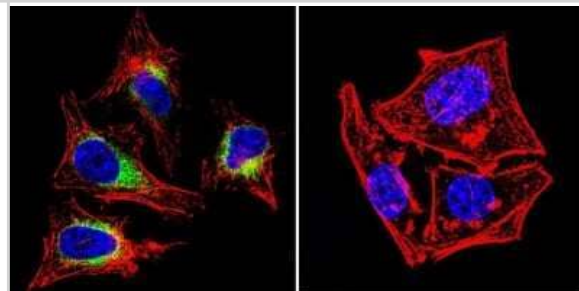
Immunohistochemistry-Paraffin: SERCA2 ATPase Antibody (2A7-A1) [NB300-581] - Both normal and cancer biopsies of deparaffinized Human skeletal muscle tissues.



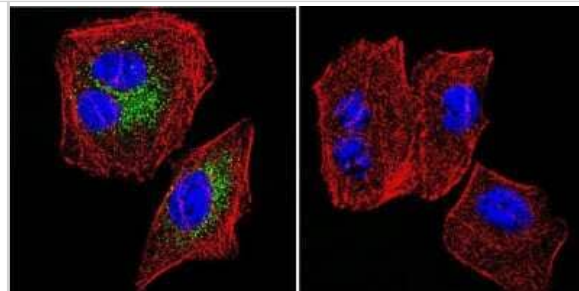
Immunocytochemistry/Immunofluorescence: SERCA2 ATPase Antibody (2A7-A1) [NB300-581] - SERCA2 ATPase staining (green), F-Actin staining with Phalloidin (red) and nuclei with DAPI (blue) is shown. Cells were grown on chamber slides and fixed with formaldehyde prior to staining. Cells were probed without (control) or with or an antibody recognizing SERCA2 ATPase at a dilution of 1:100-1:200 over night at 4C, washed with PBS and incubated with a DyLight-488 conjugated.



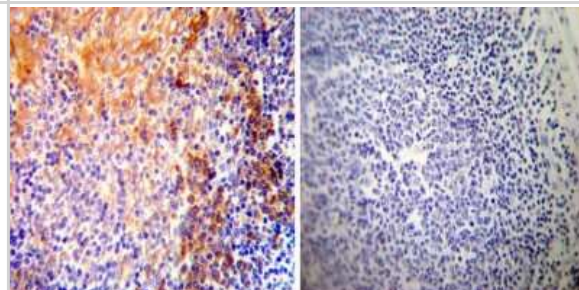
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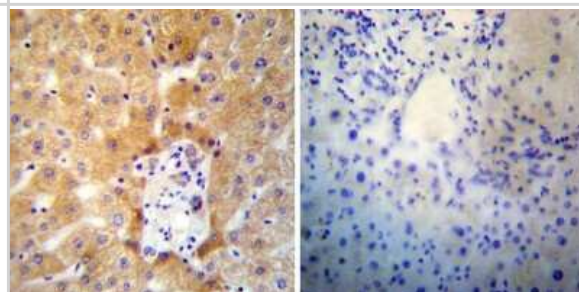
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Immunohistochemistry-Paraffin: SERCA2 ATPase Antibody (2A7-A1) [NB300-581] - Both normal and cancer biopsies of deparaffinized Human tonsil tissues.



Immunohistochemistry-Paraffin: SERCA2 ATPase Antibody (2A7-A1) [NB300-581] - Both normal and cancer biopsies of deparaffinized Human liver tissues.



## Publications

Tanton H, Sewastianik T, Seo HS et al. A novel beta-catenin/BCL9 complex inhibitor blocks oncogenic Wnt signaling and disrupts cholesterol homeostasis in colorectal cancer *Science advances* 2022-04-29 [PMID: 35486727] (ICC/IF)

Hammad AS, Yu F, Botheju WS Et al. Phosphorylation of STIM1 at ERK/CDK sites is dispensable for cell migration and ER partitioning in mitosis *Cell calcium* 2021-10-23 [PMID: 34715400] (ICC/IF, Mouse)

Uchida Y, Yamamoto Y, Sakisaka T Trans-2-enoyl-CoA reductase limits Ca<sup>2+</sup> accumulation in the endoplasmic reticulum by inhibiting the Ca<sup>2+</sup> pump SERCA2b *The Journal of biological chemistry* 2021-01-19 [PMID: 33482198]

Xie D, Geng L, Xiong K et al. Cold-Inducible RNA-Binding Protein Prevents an Excessive Heart Rate Response to Stress by Targeting Phosphodiesterase *Circ. Res.* 2020-03-26 [PMID: 32212953] (WB)

Chung YJ, Luo A, Park KC et al. Iron deficiency anemia reduces cardiac contraction by downregulating RyR2 channels and suppressing SERCA pump activity *JCI Insight* 2019-02-19 [PMID: 30779710] (WB, Mouse)

Schroeder MA, Ali MA, Hulikova A et al. Extramitochondrial domain rich in carbonic anhydrase activity improves myocardial energetics. *Proc Natl Acad Sci U S A* 2013-03-05 [PMID: 23431149] (WB, Rat)

Klug D, Boule S, Wissocque L et al. Right Ventricular Pacing With Mechanical Dyssynchrony Causes Apoptosis Interruptus and Calcium Mishandling *Can J Cardiol* 2012-10-10 [PMID: 23062666] (WB, Porcine)

Prasad AM et al. Phenylephrine hypertrophy, Ca<sup>2+</sup>-ATPase (SERCA2), and Ca<sup>2+</sup> signaling in neonatal rat cardiac myocytes. *Am J Physiol Cell Physiol*;292(6):C2269-75. 2007-06-01 [PMID: 17287366] (ICC/IF)

Movsesian MA et al. Ca(2+)-transporting ATPase, phospholamban, and calsequestrin levels in nonfailing and failing human myocardium. *Circulation*;90(2):653-7. 1994-08-01 [PMID: 8044934] (WB)

Khan SA et al. Neuronal nitric oxide synthase negatively regulates xanthine oxidoreductase inhibition of cardiac excitation-contraction coupling. *Proc Natl Acad Sci U S A*;101(45):15944-8. 2004-11-09 [PMID: 15486091] (IP)

Krizaj D, Liu X, Copenhagen DR et al. Expression of calcium transporters in the retina of the tiger salamander (*Ambystoma tigrinum*). *J Comp Neurol.* 2004-08-01 [PMID: 15236230] (IF/IHC)

Garcia-Perez C et al. Physical coupling supports the local Ca<sup>2+</sup> transfer between sarcoplasmic reticulum subdomains and the mitochondria in heart muscle. *J Biol Chem*;283(47):32771-80. 2008-11-21 [PMID: 18790739] (IF/IHC)

More publications at <http://www.novusbio.com/NB300-581>





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General: novus@novusbio.com

### **Products Related to NB300-581-10uL**

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HAF007	Goat anti-Mouse IgG Secondary Antibody [HRP]
NB720-B	Rabbit anti-Mouse IgG (H+L) Secondary Antibody [Biotin]
NBP1-96778	Mouse IgG2a Isotype Control (M2A)
NBP2-57446PEP	SERCA2 ATPase Recombinant Protein Antigen

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### **Limitations**

This product is for research use only and is not approved for use in humans or in clinical diagnosis. Primary Antibodies are guaranteed for 1 year from date of receipt.

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