

SERCA1 ATPase Monoclonal Antibody (VE121G9)

Product Details	
Size	100 µg
Species Reactivity	Amphibian, Dog, Human, Mouse, Rabbit, Rat
Published Species	Dog, Rabbit, Rat, Pig, Yeast, Amphibian, Mouse, Human
Host/Isotype	Mouse / IgG1
Class	Monoclonal
Type	Antibody
Clone	VE121G9
Conjugate	Unconjugated
Immunogen	Purified rabbit skeletal muscle sarcoplasmic reticulum.
Form	Liquid
Concentration	1 mg/mL
Purification	Protein A
Storage buffer	PBS with 1mg/mL BSA
Contains	0.05% sodium azide
Storage conditions	-20° C, Avoid Freeze/Thaw Cycles
RRID	AB_2061281

Applications	Tested Dilution	Publications
Western Blot (WB)	1 µg/mL	61 Publications
Immunohistochemistry (IHC)	-	6 Publications
Immunohistochemistry (Paraffin) (IHC (P))	1:20	-
Immunohistochemistry (Frozen) (IHC (F))	Assay-dependent	1 Publication
Immunocytochemistry (ICC/IF)	1:500	2 Publications
Immunoprecipitation (IP)	-	2 Publications
Miscellaneous PubMed (Misc)	-	4 Publications

Product Specific Information

MA3-912 detects sarcoplasmic or endoplasmic reticulum calcium 1 (SERCA1) ATPase in canine, amphibian, human, mouse, rat, and rabbit tissues.

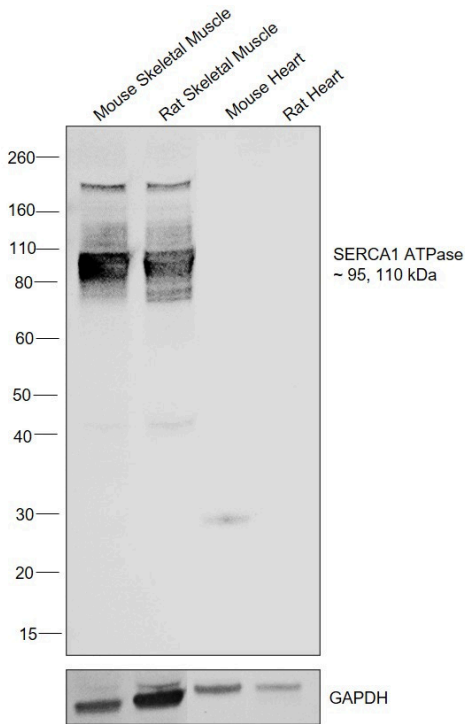
MA3-912 has been successfully used in Western blot and immunofluorescence procedures. By Western blot, this antibody detects an ~110 kDa protein representing SERCA1 ATPase in mouse muscle extracts. Immunofluorescence staining of SERCA1 ATPase in canine skeletal muscle with MA3-912 results in strong labeling of the entire type II (fast) myofiber. MA3-912 has also been shown to inhibit the crystallization of SERCA ATPase induced by vanadate.

The MA3-912 antigen is purified rabbit skeletal muscle sarcoplasmic reticulum. This antibody recognizes an epitope between amino acid residues 506 and the C-terminus of rabbit skeletal muscle ATPase, a region that is exposed in native sarcoplasmic reticulum.

Product Images For SERCA1 ATPase Monoclonal Antibody (VE121G9)

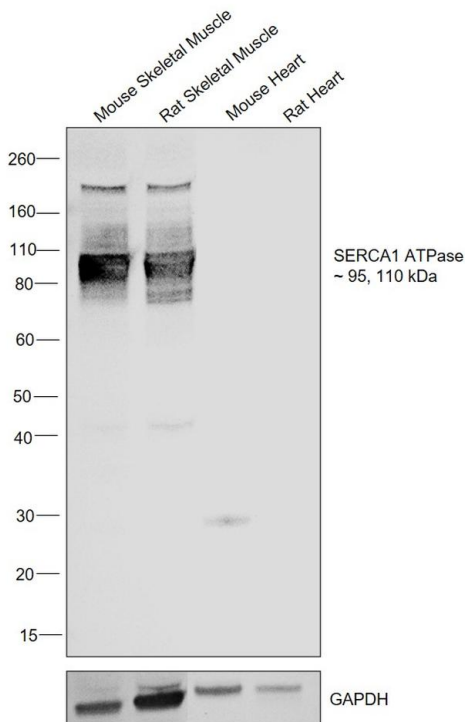
SERCA1 ATPase Antibody (MA3-912)

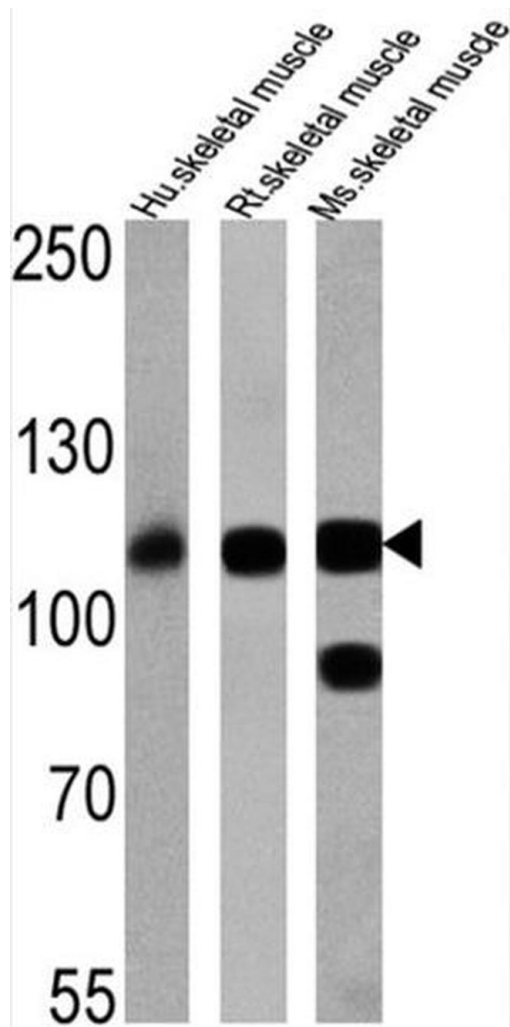
Antibody specificity was demonstrated by detection of differential basal expression of the target in skeletal muscle and heart tissues of Mouse and Rat owing to their inherent genetic constitution. Relative expression of SERCA1 ATPase was observed in differential basal expression of the target across the tissue models owing to their inherent genetic constitution using Anti-SERCA1 ATPase Monoclonal Antibody (VE121G9) (Product # MA3-912) in Western Blot.



SERCA1 ATPase Antibody (MA3-912) in WB

Western blot was performed using Anti-SERCA1 ATPase Monoclonal Antibody (VE121G9) (Product # MA3-912) and a 95 kDa band corresponding to SERCA1 ATPase was observed across Mouse and Rat skeletal muscle. Tissue extracts (30 µg lysate) of Mouse Skeletal Muscle (Lane 1), Rat Skeletal Muscle (Lane 2), Mouse Heart (Lane 3) and Rat Heart (Lane 4) were electrophoresed using NuPAGE™ 4-12% Bis-Tris Protein Gel (Product # NP0321BOX). Resolved proteins were then transferred onto a Nitrocellulose membrane (Product # LC2002) by iBlot® 2 Dry Blotting System (Product # IB21001). The blot was probed with the primary antibody (1:2500) and detected by chemiluminescence with Goat anti-Mouse IgG (H+L) Superclonal™ Recombinant Secondary Antibody, HRP (Product # A28177, 1:4000) using the iBright FL 1000 (Product # A32752). Chemiluminescent detection was performed using Novex® ECL Chemiluminescent Substrate Reagent Kit (Product # WP20005).





SERCA1 ATPase Antibody (MA3-912) in WB

Western blot analysis of SERCA1 ATPase was performed by loading 25 μ g of human skeletal muscle (lane 1), rat skeletal muscle (lane 2) and mouse skeletal muscle (lane 3) onto an SDS polyacrylamide gel. Proteins were transferred to a PVDF membrane and blocked at 4°C overnight. The membrane was probed with a SERCA1 ATPase monoclonal antibody (Product # MA3-912) at a dilution of 1:2000 overnight at 4°C, washed in TBST, and probed with an HRP-conjugated secondary antibody for 1 hr at room temperature in the dark. Chemiluminescent detection was performed using Pierce ECL Plus Western Blotting Substrate (Product # 32132). Results show a band at ~110 kDa.

[View more figures on thermofisher.cn](http://thermofisher.cn)

Western Blot (61)

The Journal of biological chemistry

Low-dose lithium supplementation promotes adipose tissue browning and sarco(endo)plasmic reticulum Ca^{2+} ATPase uncoupling in muscle.

"Published figure using SERCA1 ATPase monoclonal antibody (Product # MA3-912) in Western Blot"

Authors: Geromella MS, Ryan CR, Braun JL, Finch MS, Maddalena LA, Bagshaw O, Hockey BL, Moradi F, Fenech RK, Ryoo J, Marko DM, Dhaliwal R, Sweezey-Munroe J, Hamstra SI, Gardner G, Silvera S, Vandenboom R, Roy BD, Stuart JA, MacPherson REK, Fajardo VA

Year
2022

Frontiers in endocrinology

The effects of neurogranin knockdown on SERCA pump efficiency in soleus muscles of female mice fed a high fat diet.

"Published figure using SERCA1 ATPase monoclonal antibody (Product # MA3-912) in Western Blot"

Authors: Braun JL, Ryoo J, Goodwin K, Copeland EN, Geromella MS, Baranowski RW, MacPherson REK, Fajardo VA

Year
2022

Species
Mouse

[View more WB references on thermofisher.cn](#)

Immunohistochemistry (6)

eLife

Intracellular calcium leak lowers glucose storage in human muscle, promoting hyperglycemia and diabetes.

"MA3-912 was used in Western Blotting to reveal that Malignant Hyperthermia Susceptibility entails a wide-ranging, pathogenic change in glucose metabolism."

Authors: Tamminen ER, Kraeva N, Figueroa L, Manno C, Ibarra CA, Klip A, Riazi S, Rios E

Year
2020

Species
Human

Dilution
1:2000

Acta neuropathologica

Myofibrillar disorganization characterizes myopathy of camptocormia in Parkinson's disease.

"MA3-912 was used in immunohistochemistry to investigate the myofibrillar disorganization in the myopathy of camptocormia"

Authors: Wrede A, Margraf NG, Goebel HH, Deuschl G, Schulz-Schaeffer WJ

Year
2012

Species
Mouse

[View more IHC references on thermofisher.cn](#)

More applications with references on thermofisher.cn

IHC (F) (1) ICC/IF (2) IP (2) Misc (4)

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