

Monoclonal Antibody to ATP2A2 / SERCA2 - Ascites

Alternate names:	ATP2B, Calcium pump 2 ATPase, Calcium-transporting ATPase sarcoplasmic reticulum type, Endoplasmic reticulum class 1/2 Ca(2+) ATPase, SR Ca(2+)-ATPase 2, Sarcoplasmic/endoplasmic reticulum calcium ATPase 2, slow twitch skeletal muscle isoform
Catalog No.:	SM5113
Quantity:	0.1 ml
Concentration:	2.1 mg/mL
Background:	ATP dependent calcium pumps are responsible in part for the maintenance of low cytoplasmic free calcium concentrations. The ATP pumps that reside in intracellular organelles are comprised of a family of structurally related enzymes, termed the sarcoplasmic or endoplasmic reticulum calcium (SERCA) ATPases. The SERCA2 gene is subject to tissue dependent processing which is responsible for the generation of SERCA2a muscle-specific isoform expressed in type I (slow) skeletal, cardiac and smooth muscle and the SERCA2b isoform expressed in all cell types. The SERCA3 gene is not as well characterized and is found in non-muscle cells.
Uniprot ID:	P16615
NCBI:	NP_001672.1
GeneID:	488
Host / Isotype:	Mouse / IgG2a
Clone:	2A7-A1
Immunogen:	Purified canine cardiac sarcoplasmic reticulum vesicles.
Format:	State: Liquid Ascites in PBS containing 0.05% Sodium Azide as preservative.
Applications:	Immunocytochemistry: 1/250. Western Blot: 1/1,000; detects an ~110 kDa protein representing SERCA2 ATPase in rat cardiac tissue. Immunohistochemistry (Frozen): 1/100 Immunohistochemistry (Paraffin): 1 ug/mL Immunofluorescence: 1/100 - 1/200 Flow Cytometry: 1 ug per 10 ⁶ cells Immunoprecipitation. Other applications not tested. Optimal dilutions are dependent on conditions and should be determined by the user.
Specificity:	This antibody detects sarcoplasmic or endoplasmic reticulum calcium (SERCA) 2 ATPase. Species: Canine, Rat, Human, Rabbit, Mouse, Guinea Pig. Other species not tested.

Storage:

Store the antibody at -20°C.
Avoid repeated freezing and thawing.
Shelf life: one year from despatch.

General Readings:

1. Circulation, 90(2): 653-657, 1994.
2. Proc. Natl. Acad. Sci., 91: 2694-2698, 1994.
3. J. Biol. Chem, 271(10): 5536-5544, 1996.
4. FASEB 19(1):53-61, 2005.
5. PNAS vol. 101 no. 25, 9199-9204, Jun 2004
6. J Appl Physiol, Dec 1999; 87: 2143
7. Am J Physiol Heart Circ Physiology 2005, manuscript number doi:10.1152/ajpheart.00424.2004
8. Circulation Research Feb 2005 doi:10.1161/01.RES.0000160609.98948.25
9. Physiol Genomics 22: 118-126 Mar 2005
10. Diabetes 54:1573-1580, 2005.
11. Am J Physiol Heart Circ Physiol Vol. 286, H68-75 Jan 2004
12. Am J Physiol Heart Circ Physiol 286: H1322-H1330, Apr 2004
13. JBC Vol. 279, No. 20, Issue of May 14, pp. 21383-21393, 2004
14. Circ. Research Vol. 96, 1006-1013, 2005
15. J Appl Physiol Vol 97, 484-490, 2004
16. AJP-Endo, Vol 284, 597-610, 2003
17. J. Am. Coll. Cardiol. Vol 42, 1666-1673, Nov 2003
18. Diabetes, Vol 51: 1166, Apr 2002
19. Am. J. Physiol. Heart Circ. Physiol. 283(4):H1616-H1626, 2002.
20. JBC 277(47):44740-44746, 2002.
21. Am. J. Physiol. Heart Circ. Physiol. 283(2):H576-H583, 2002.
22. Am. J. Heart Circ. Physiol. 283(6):H2450-H2457, 2002.
23. J Appl Physiol, Jul 2000; 89: 38.
24. Am J Physiol Regulatory Integrative Comp Physiol, Jul 2000; 279: 152.
25. Am J Physiol Regulatory Integrative Comp Physiol, Mar 2000; 278: 598.
26. Circ. Res., Mar 1999; 84: 562 - 570.
27. J. Clin. Invest., Jul 1998; 102: 72.
28. J. Biol. Chem., Oct 2006; 281: 31894 - 31908
29. Circ. Res., Mar 2001; 88: 415 - 421.
30. Am J Physiol Heart Circ Physiol, Oct 1999; 277: H1418 - H1428.
31. JBC 277(30):26725-26728, 2002.
32. Circulation 106(4):407-411, 2002.
33. Circ. Res. 91(11):1015-1022, 2002.
34. JPET Fast Forward, doi:10.1124/jpet.105.099432, Jan 2006
35. Circ. Res., Vol 93: 230-237, Aug 2003
36. Circulation, Vol 108: 929-932, Aug 2003
37. Circulation, Jun 2006; 113: 2724 - 2732.
38. Am J Physiol Cell Physiol Vol 287, C1300-C1310, Nov 2004
39. Am J Physiol Heart Circ Physiol Bol 285, H2605-H2613, Dec 2003
40. PNAS Vol 101, No 8, 2241-2246, Feb 2004
41. JBC Vol 280, No 48, 40337-40346, Dec 2005
42. AJP-Heart Vol 285, 2657-2662, Dec 2003
43. J Appl Physiol, Vol 92: 18, Jan 2002
44. PNAS Vol 101, No 45, 15944-15948, Nov 2004
45. PNAS Vol 101, No 47, 16683-16688, Nov 2004
46. FASEB Journal Vol. 16 1310-1312, 2002.
47. Am. J. Physiol. 277: H584-H594, 1999.
48. Am J Physiol Heart Circ Physiology

49. 10.1152/ajpheart.00957.2003 2005
50. Am J Physiol Heart Circ Physiology 2005, manuscript number doi:10.1152/ajpheart.00873.2004.
51. J. Biochem., 340:657-669, 1999
52. FEBS Letters., 443:308-312, 1999.
53. Circ Res Vol 94 794-801, Apr 2004
54. AJP-Heart 286, 2219-2228, Jun 2004
55. Am. J. Physiol. Heart Circ. Physiol. 277(4):H1418-1428, 1999.
56. J. Appl. Physiol. 97:484-490, 2004.
57. Circulation, Feb 2000; 101: 790 - 796.