

Mouse actin alpha-cardiac Monoclonal Antibody

Mouse anti actin alpha-cardiac

CATALOG # AAA77515	HOST Mouse	REACTIVITY Caprine, Human, Rabbit, Rat, Swine, Zebrafish	APPLICATIONS Western Blot, Immunohistochemistry, ELISA
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PRODUCT SYNONYMS

actin alpha-cardiac; Monoclonal Antibody; Mouse anti actin alpha-cardiac; anti-actin alpha-cardiac antibody

PRODUCT SPECIFICATIONS

Host	Mouse
Reactivity	Caprine, Human, Rabbit, Rat, Swine, Zebrafish
Clonality	Monoclonal
Isotype	IgG1
Clone Number	22D3
Specificity	Clone 22D3 is an antibody highly specific for a- cardiac actin, and does not cross react with other actin isoforms.
Form/Format	Each vial contains 100 ul 1 mg/ml purified monoclonal antibody in PBS containing 0.09% sodium azide.
Applicable Applications for anti-actin alpha-cardiac antibody	WB (Western Blot), IHC (Immunohistochemistry), ELISA
Source Note	22D3 is a Mouse monoclonal IgG1 antibody derived by fusion of NS0 Mouse myeloma cells with spleen cells from a BALB/c Mouse immunized with a peptide comprising the N-terminal nonapeptide of alpha-cardiac actin with an acetylated N-terminus (Ac-DDEETTALVC-COOH) coupled to keyhole limpet hemocyanin through the cysteine residue.
Reactivity Note	The epitope recognized by alpha-SM1 is highly conserved. The antibody therefore cross-reacts with many species including protochordates, lower craniates and mammals.
Preparation and Storage	Store at 4 degree C, or in small aliquots at -20 degree C.

IMAGES



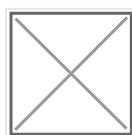
Application Data

Figure 3: Immunofluorescence staining of developing myocardium in 1 month old zebrafish embryo



Application Data

Figure 2: Immunofluorescence staining of muscle tissue in the tail of 3 days old zebrafish embryo



Application Data

Figure 1: Paraffin section of human cardiac muscle immunostained with 22D3 (1:500)

ADDITIONAL INFORMATION

Related Product Information for anti-actin alpha-cardiac antibody	Among the six actin isoforms described in mammals, two are found in virtually all cells (beta- and gamma-cytoplasmic), two are detected in smooth muscle cells (alpha- and gamma-smooth muscle) and two are present in striated muscles, one predominantly in skeletal (alpha-skeletal) and one in cardiac (alpha-cardiac) muscle cells. These actin isoforms differ slightly in their N-terminus, but the sequence of each of these actins is highly conserved in higher vertebrates. Cardiac alpha-actin, which is the main actin isoform in the adult heart, has also been shown to be the predominant form in early muscle development. In later development the expression of alpha-cardiac actin is down regulated and alpha-skeletal actin becomes the dominant isoform in the adult skeletal muscle.
Product Categories/Family for anti-actin alpha-cardiac antibody	Cytoskeletal; Cardiovascular; Cell differentiation; Cytoskeleton; Stem cell research
References	Vandekerckhove, J. and Weber, K. (1978). At least six different actins are expressed in a higher mammal: an analysis based on the amino acid sequence of the amino-terminal tryptic peptide. J Mol Biol. 126(4), 783-802. Vandekerckhove, J., Bugaisky, G. and Buckingham, M. (1986). Simultaneous expression of skeletal muscle and heart actin proteins in various striated muscle tissues and cells. J Biol Chem. 261(4),1838-43. Suurmeijer, A.J., Clément, S., Francesconi, A., Bocchi, L., Angelini, A., Van Veldhuisen, D.J., Spagnoli, L.G., Gabbiani, G. and Orlandi, A. (2003). Alpha-actin isoform distribution in normal and failing Human heart: a morphological, morphometric, and biochemical study. J Pathol. 199(3), 387-97. Chaponnier, C. and Gabbiani, G. (2004). Pathological situations characterized by altered actin isoform expression. J Pathol. 204(4), 386-95. Driesen, R.B., Verheyen F.K., Debie, W., Blaauw, E., Babiker, F.A., Cornelussen, R.N., Ausma, J., Lenders, M.H., Borgers, M., Chaponnier, C. and Ramaekers, F.C. (2009). Re-expression of alpha skeletal actin as a marker for dedifferentiation in cardiac pathologies. J Cell Mol Med 13(5), 896-908.

For Research Use Only. Not for use in diagnostic or therapeutic procedures. Small volumes of product may become entrapped in the seal of the vial during shipment and storage; if necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the cap.

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Online datasheet: <https://stage.aaabiotech.com/monoclonal/actin-alpha-cardiac-antibody-clone-22d3-western-blot-immunohistochemistry-elisa/77515>