ARG83891
Rat alpha smooth muscle Actin ELISA Kit

Package: 96 wells
Store at: 4°C

Summary

Product Description	ARG83891 Rat alpha smooth muscle Actin ELISA Kit is an Enzyme Immunoassay kit for the quantification of Rat alpha smooth muscle Actin in tissue homogenates and cell lysates
Tested Reactivity	Rat
Tested Application	ELISA
Target Name	alpha smooth muscle Actin
Conjugation	HRP
Conjugation Note	Substrate: TMB and read at 450 nm.
Sensitivity	0.053 ng/ml
Sample Type	tissue homogenates and cell lysates
Standard Range	0.16 - 10 ng/ml
Sample Volume	100 µl
Alternate Names	Cell growth-inhibiting gene 46 protein; MYMY5; ACTSA; Alpha-actin-2; Actin, aortic smooth muscle; AAT6

Application Instructions

Assay Time	3.5 hours

Properties

Form	96 well
Storage instruction	Store the kit at 4°C. Keep microplate wells sealed in a dry bag with desiccants. Do not expose test reagents to heat, sun or strong light during storage and usage. Please refer to the product user manual for detail temperatures of the components.
Note	For laboratory research only, not for drug, diagnostic or other use.

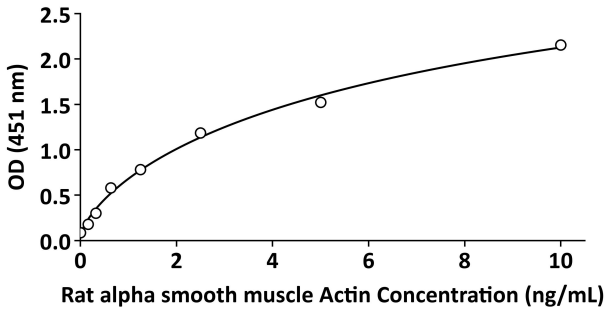
Bioinformation

Background	This antibody stains smooth muscle cells in vessel walls, gut wall, and myometrium. Myoepithelial cells in breast and salivary gland are also stained. It reacts with tumors arising from smooth muscles and myoepithelial cells. Actin from fibroblasts (beta- and gamma-cytoplasmic), striated muscle (alpha-sarcomeric), and myocardium (alpha-myocardial) are not stained.
PTM	Oxidation of Met-46 and Met-49 by MICALs (MICAL1, MICAL2 or MICAL3) to form methionine sulfoxide promotes actin filament depolymerization. MICAL1 and MICAL2 produce the (R)-S-oxide form. The (R)-S-oxide form is reverted by MSRB1 and MSRB2, which promote actin repolymerization (By similarity). Monomethylation at Lys-86 (K84me1) regulates actin-myosin interaction and actomyosin-dependent processes. Demethylation by ALKBH4 is required for maintaining actomyosin dynamics supporting normal cleavage furrow ingression during cytokinesis and cell migration. (Microbial infection) Monomeric actin is cross-linked by V.cholerae toxins RtxA and VgrG1 in case of infection: bacterial toxins mediate the cross-link between Lys-52 of one monomer and Glu-272 of another actin monomer, resulting in formation of highly toxic actin oligomers that cause cell rounding

(PubMed:19015515). The toxin can be highly efficient at very low concentrations by acting on formin homology family proteins: toxic actin oligomers bind with high affinity to formins and adversely affect both nucleation and elongation abilities of formins, causing their potent inhibition in both profilin-dependent and independent manners (PubMed:26228148).

Cellular Localization	Cytoplasm

Images



ARG83891 Rat alpha smooth muscle Actin ELISA Kit standard curve image

ARG83891 Rat alpha smooth muscle Actin ELISA Kit results of a typical standard run with optical density reading at 450 nm.