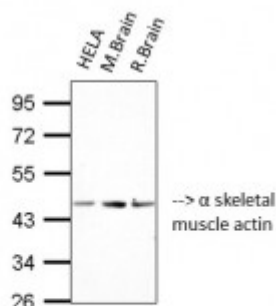


## Anti-alpha skeletal muscle actin antibody



Western Blot (WB) analysis of 1. HELA 2. Mouse Brain 3. Rat Brain cells using alpha skeletal muscle actin Monoclonal Antibody. (STJ97051)



### Description

alpha skeletal muscle actin is a protein encoded by the ACTA1 gene which is approximately 42 in kDa. alpha skeletal muscle actin is localised to the cytoplasm and cytoskeleton. It is involved in actin nucleation, the PAK pathway, VEGF pathway and Sertoli-Sertoli cell junction dynamics. This protein falls under the actin family of proteins, which are highly conserved proteins that play a role in cell motility, structure and integrity. Alpha, beta and gamma actin isoforms have been identified, with alpha actins being a major constituent of the contractile apparatus. alpha skeletal muscle actin is expressed in the muscle, heart, thyroid, liver and kidney. Mutations in the ACTA1 gene may result in zebra body myopathy. STJ97051 was developed from clone 4B11 and was affinity-purified from mouse ascites by affinity-chromatography using specific immunogen. The antibody detects endogenous alpha Skeletal Muscle Actin protein.

<b>Model</b>	STJ97051
<b>Host</b>	Mouse
<b>Reactivity</b>	Human, Mouse, Rat
<b>Applications</b>	IP, WB
<b>Immunogen</b>	Synthetic Peptide
<b>Immunogen Region</b>	Internal
<b>Gene ID</b>	<a href="#">58</a>
<b>Gene Symbol</b>	<a href="#">ACTA1</a>
<b>Dilution range</b>	WB 1:5000-10000IP 1:200
<b>Specificity</b>	The antibody detects endogenous alpha Skeletal Muscle Actin protein.

<b>Purification</b>	The antibody was affinity-purified from mouse ascites by affinity-chromatography using specific immunogen.
<b>Clone ID</b>	4B11
<b>Note</b>	For Research Use Only (RUO).
<b>Protein Name</b>	Actin, alpha skeletal muscle Alpha-actin-1
<b>Clonality</b>	Monoclonal
<b>Conjugation</b>	Unconjugated
<b>Isotype</b>	IgG1
<b>Formulation</b>	Liquid in PBS containing 50% glycerol, 0.5% BSA and 0.02% sodium azide.
<b>Storage Instruction</b>	Store at -20°C, and avoid repeat freeze-thaw cycles.
<b>Database Links</b>	<a href="https://www.ebi.ac.uk/ENSP/entry/HGNC:129OMIM:102610">HGNC:129OMIM:102610</a>
<b>Alternative Names</b>	Actin, alpha skeletal muscle Alpha-actin-1
<b>Function</b>	Actins are highly conserved proteins that are involved in various types of cell motility and are ubiquitously expressed in all eukaryotic cells.
<b>Cellular Localization</b>	Cytoplasm, cytoskeleton.
<b>Post-translational Modifications</b>	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 . 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 . 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 .