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**Product Name: Actin  $\alpha$ 1 Rabbit Polyclonal Antibody****Catalog #: APRab06544**

For research use only.

**Summary**

<b>Description</b>	Rabbit polyclonal Antibody
<b>Host</b>	Rabbit
<b>Application</b>	WB,IHC,ICC/IF,ELISA
<b>Reactivity</b>	Human,Mouse,Rat
<b>Conjugation</b>	Unconjugated
<b>Modification</b>	Unmodified
<b>Isotype</b>	IgG
<b>Clonality</b>	Polyclonal
<b>Form</b>	Liquid
<b>Concentration</b>	1mg/ml
<b>Storage</b>	Aliquot and store at -20°C (valid for 12 months). Avoid freeze/thaw cycles.
<b>Shipping</b>	Ice bags
<b>Buffer</b>	Liquid in PBS containing 50% glycerol, 0.5% protective protein and 0.02% New type preservative N.
<b>Purification</b>	Affinity purification

**Application**

<b>Dilution Ratio</b>	WB 1:500-1:2000,IHC 1:100-1:300,ICC/IF 1:50-1:200,ELISA 1:10000-1:20000
<b>Molecular Weight</b>	45kDa

**Antigen Information**

<b>Gene Name</b>	ACTA1
<b>Alternative Names</b>	ACTA1; ACTA; Actin; alpha skeletal muscle; Alpha-actin-1
<b>Gene ID</b>	58.0
<b>SwissProt ID</b>	P68133
<b>Immunogen</b>	The antiserum was produced against synthesized peptide derived from human Actin-alpha-1. AA range:1-50

**Background**

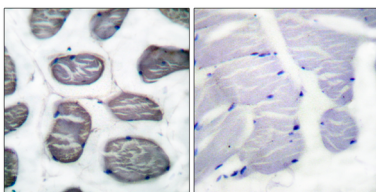
The product encoded by this gene belongs to the actin family of proteins, which are highly conserved proteins that play a role

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, while beta and gamma actins are involved in the regulation of cell motility. This actin is an alpha actin that is found in skeletal muscle. Mutations in this gene cause nemaline myopathy type 3, congenital myopathy with excess of thin myofilaments, congenital myopathy with cores, and congenital myopathy with fiber-type disproportion, diseases that lead to muscle fiber defects. [provided by RefSeq, Jul 2008],disease:Defects in ACTA1 are a cause of congenital myopathy with excess of thin myofilaments (CM) [MIM:102610],disease:Defects in ACTA1 are a cause of congenital myopathy with fiber-type disproportion (CFTD) [MIM:255310]; also known as congenital fiber-type disproportion myopathy (CFTDM). CFTD is a genetically heterogeneous disorder in which there is relative hypotrophy of type 1 muscle fibers compared to type 2 fibers on skeletal muscle biopsy. However, these findings are not specific and can be found in many different myopathic and neuropathic conditions.,disease:Defects in ACTA1 are the cause of nemaline myopathy type 3 (NEM3) [MIM:161800]. Nemaline myopathy (NEM) is a form of congenital myopathy characterized by abnormal thread- or rod-like structures in muscle fibers on histologic examination. The clinical phenotype is highly variable, with differing age at onset and severity.,function:Actins are highly conserved proteins that are involved in various types of cell motility and are ubiquitously expressed in all eukaryotic cells.,miscellaneous:In vertebrates 3 main groups of actin isoforms, alpha, beta and gamma have been identified. The alpha actins are found in muscle tissues and are a major constituent of the contractile apparatus. The beta and gamma actins coexist in most cell types as components of the cytoskeleton and as mediators of internal cell motility.,similarity:Belongs to the actin family.,subunit:Polymerization of globular actin (G-actin) leads to a structural filament (F-actin) in the form of a two-stranded helix. Each actin can bind to 4 others. Interacts with TTID,

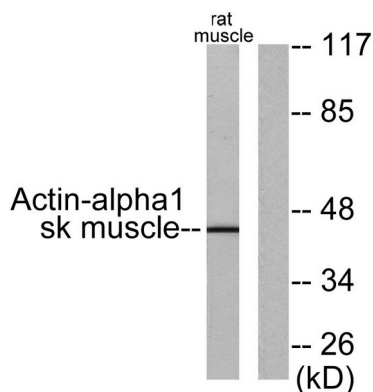
## Research Area

Adherens\_Junction

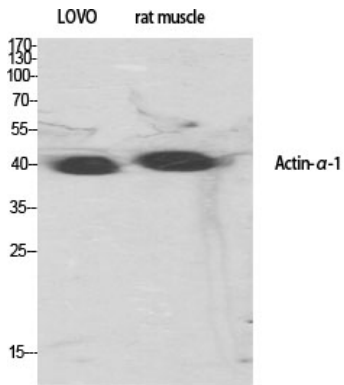
## Image Data



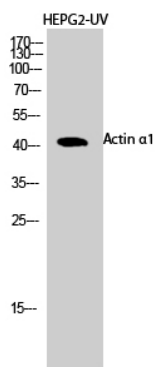
Immunohistochemistry analysis of paraffin-embedded human muscle tissue, using Actin-alpha-1 Antibody. The picture on the right is blocked with the synthesized peptide.



Western blot analysis of lysates from rat muscle cells, using Actin-alpha-1 Antibody. The lane on the right is blocked with the synthesized peptide.



Western Blot analysis of various cells using Actin  $\alpha$ 1 Polyclonal Antibody diluted at 1 : 500



Western Blot analysis of HEPG2-UV cells using Actin  $\alpha$ 1 Polyclonal Antibody diluted at 1 : 500