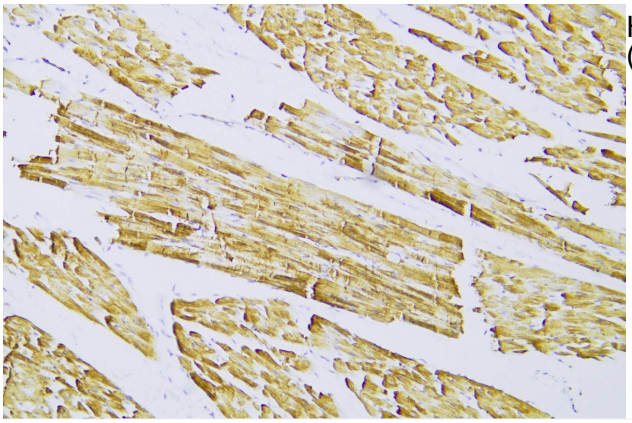
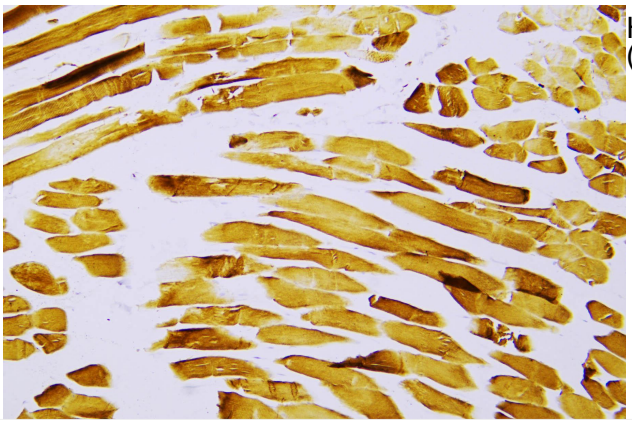
Actin (pan) (ABT56R) Rabbit mAb (Ready to Use)

Catalog No	YP-rAb-18172
Isotype	IgG
Reactivity	Human,Mouse,Rat,Bovine,Pig,Chicken
Applications	IHC
Gene Name	ACTC1;ACTA1;ACTA2;ACTB;ACTG1;ACTG2
Protein Name	Actin pan
Purification Process	Protein A
Specificity	This antibody detects endogenous levels of Actin pan
Formulation	The prediluted ready-to-use antibody is diluted in phosphate buffer saline containing stabilizing protein and 0.05% Proclin 300
Source	Monoclonal, Rabbit,IgG
Dilution	Ready to use for IHC Note: For IHC, we suggest antigen retrieval with TE buffer pH 9.0
Concentration	0.5 mg/ml
Purity	≥90%
Storage Stability	2° C to 8° C/1 year,Ship by ice bag
Synonyms	Actin, alpha cardiac muscle 1 ; Alpha-cardiac actin ; ACTC ; Actin, alpha skeletal muscle ; Alpha-actin-1 ; ACTA1 ; Actin, aortic smooth muscle ; Alpha-actin-2 ; ACTA2 ; ACTSA, ACTVS ; Actin, cytoplasmic 1 ; Beta-actin ; ACTB ; Actin, cytoplasmic 2 ; Gamma-actin ; ACTG1 ; ACTG ; Actin, gamma-enteric smooth muscle ; Alpha-actin-3 ; Gamma-2-actin ; Smooth muscle gamma-actin ; ACTA3, ACTL3, ACTSG ; ACTG2
Observed Band	
Calculated Molecular Weight	
Cell Pathway	Cytoplasm, cytoskeleton . Nucleus . Localized in cytoplasmic mRNP granules containing untranslated mRNAs. .
Tissue Specificity	B-cell lymphoma,Brain,Cajal-Retzius cell,Eye,Fetal brain cortex,Foreskin,Hepatocellular car
Function	Disease:Defects in ACTB are a cause of dystonia juvenile-onset (DYTJ) [MIM:607371]. DYTJ is a form of dystonia with juvenile onset. Dystonia is defined by the presence of sustained involuntary muscle contraction, often leading to abnormal postures. DYTJ patients manifest progressive, generalized, dopa-unresponsive dystonia, developmental malformations and sensory hearing

	loss.,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. Component of the BAF complex, which includes at least actin (ACTB), ARID1A, ARID1B/BAF250, SMARCA2, SMARCA4/BRG1, ACTL6A/BAF53, ACTL6B/BAF53B, SMARCE1/BAF57 SMARCC1/BAF155, SMARCC2/BAF170, SMARCB1/SNF5/INI1, and one or more of SMARCD1/BAF60A, SMARCD2/BAF60B, or SMARCD3/BAF60C. In muscle cells, the BAF complex also contains DPF3. Found in a complex with XPO6, Ran, ACTB and PFN1. Interacts with XPO6.,
Background	Actin, a ubiquitous eukaryotic protein, is the major component of the cytoskeleton. At least six isoforms are known in mammals. Nonmuscle β - and γ -actin, also known as cytoplasmic actin, are ubiquitously expressed, controlling cell structure and motility . While all actin isoforms are highly homologous, cytoplasmic β - and γ -actin protein sequences differ by only four biochemically similar amino acids. For this reason, antibodies raised to β -actin may cross-react with γ -actin, and vice versa. α -cardiac and α -skeletal actin are expressed in striated cardiac and skeletal muscles, respectively; two smooth muscle actins, α - and γ -actin, are found primarily in vascular smooth muscle and enteric smooth muscle, respectively. These actin isoforms regulate the contractile potential of muscle cells. Actin exists mainly as a fibrous polymer, F-actin. In response to cytoskeletal reorganizing signals during processes such as cytokinesis, endocytosis, or stress, cofilin promotes fragmentation and depolymerization of F-actin, resulting in an increase in the monomeric globular form, G-actin. The ARP2/3 complex stabilizes F-actin fragments and promotes formation of new actin filaments. Research studies have shown that actin is hyperphosphorylated in primary breast tumors. Cleavage of actin under apoptotic conditions has been observed in vitro and in cardiac and skeletal muscle, as shown in research studies. Actin cleavage by caspase-3 may accelerate ubiquitin/proteasome-dependent muscle proteolysis.
matters needing attention	Avoid repeated freezing and thawing!
Usage suggestions	This product can be used in immunological reaction related experiments. For more information, please consult technical personnel.



Human myocardium was stained with anti-Actin pan (ABT56R) rabbit mAb



Human skeletal muscle was stained with anti-Actin pan (ABT56R) rabbit mAb