



# Anti-ACTB polyclonal antibody (CPBT-67782RH)

This product is for research use only and is not intended for diagnostic use.

## PRODUCT INFORMATION

### Product Overview

Rabbit anti Human actin beta antibody recognizes ACTB, one of the cytoplasmic actin isoforms, a 41.7 kDa cytoskeletal protein. Actins are highly conserved proteins that are involved in cell motility, structure and integrity and are ubiquitously expressed in all eukaryotic cells. Higher vertebrates express six actin isoforms encoded for by distinct genes. Actin isoforms are highly evolutionarily conserved. Two striated muscle isoforms, alpha skeletal and alpha cardiac, two smooth muscle isoforms, alpha smooth and gamma smooth together with two cytoplasmic isoforms, beta cytoplasmic and gamma cytoplasmic are encoded by genes on chromosomes 1, 15, 10, 2, 7 and 17 respectively. All actin isoforms have highly homologous nucleotide sequences with the heterogeneity most notably in the N terminal region. However, small differences in primary structure here and elsewhere affect the conformational state of the various isoforms and their affinity for a range of actin binding proteins (ABPs). The range of affinities for ABPs suggests that where multiple globular monomeric (G-actin) forms exist at the same site, polymerisation may result in the formation of filamentous (F-actin) enriched for one particular isoform. Defects in actin beta are a cause of juvenile dystonia, a condition that results in movement disorders due to disordered muscle tonicity, abnormal posture, development malformations and sensory hearing loss.

<b>Specificity</b>	ACTIN BETA
<b>Immunogen</b>	Synthetic Peptide corresponding to amino acid sequence 359-368 of human beta actin.
<b>Isotype</b>	IgG
<b>Source/Host</b>	Rabbit
<b>Species Reactivity</b>	Human
<b>Conjugate</b>	Unconjugated
<b>Applications</b>	ELISA; IF; IHC-P; WB

<b>Format</b>	Purified IgG - liquid
<b>Size</b>	50 µg
<b>Preservative</b>	0.01% Sodium Azide
<b>Storage</b>	in frost-free freezers is not recommended. This product should be stored undiluted. Avoid repeated freezing and thawing as this may denature the antibody. Should this product contain a precipitate we recommend microcentrifugation before use.

## GENE INFORMATION

<b>Gene Name</b>	<a href="#">ACTB actin, beta [ Homo sapiens (human) ]</a>
<b>Official Symbol</b>	ACTB
<b>Synonyms</b>	ACTB; actin, beta; BRWS1; PS1TP5BP1; actin, cytoplasmic 1; beta cytoskeletal actin; PS1TP5-binding protein 1; ACTIN BETA;
<b>Entrez Gene ID</b>	<a href="#">60</a>
<b>Protein Refseq</b>	<a href="#">NP_001092</a>
<b>UniProt ID</b>	P60709
<b>Chromosome Location</b>	7p22
<b>Pathway</b>	Adherens junction; Arrhythmogenic right ventricular cardiomyopathy; Arrhythmogenic right ventricular cardiomyopathy (ARVC); Axon guidance; Bacterial invasion of epithelial cells; Chaperonin-mediated protein folding; Chromatin modifying enzymes; Chromatin organization;
<b>Function</b>	ATP binding; contributes_to RNA polymerase II core promoter proximal region sequence-specific DNA binding; contributes_to RNA polymerase II distal enhancer sequence-specific DNA binding; Tat protein binding; kinesin binding; nitric-oxide synthase binding; contributes_to nucleosomal DNA binding; protein binding; protein kinase binding; structural constituent of cytoskeleton;