



Anti-ACTB (N-terminal) polyclonal antibody (CPBT-67800RH)

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 human actin beta (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.

Specificity	ACTIN BETA
Immunogen	A peptide corresponding to an 16 amino acid sequence from near the amino terminus of human Actin beta.
Isotype	IgG
Source/Host	Rabbit
Species Reactivity	Human, Mouse, Rat
Conjugate	Unconjugated

Applications	IHC-Fr; WB
Format	Purified IgG - liquid
Size	100 µg
Preservative	0.02% Sodium Azide
Storage	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

Gene Name	ACTB actin, beta [Homo sapiens (human)]
Official Symbol	ACTB
Synonyms	ACTB; actin, beta; BRWS1; PS1TP5BP1; actin, cytoplasmic 1; beta cytoskeletal actin; PS1TP5-binding protein 1; ACTIN BETA;
Entrez Gene ID	60
Protein Refseq	NP_001092
UniProt ID	P60709
Chromosome Location	7p22
Pathway	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;
Function	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;