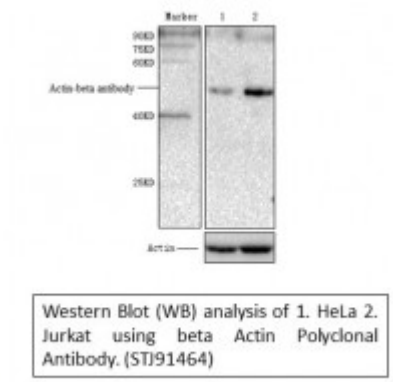
Anti-Beta Actin antibody



Western Blot (WB) analysis of 1. HeLa 2. Jurkat using beta Actin Polyclonal Antibody. (STJ91464)

Description	Beta actin is a member of the actin protein family and is encoded by the ACTB gene. It localises to the cytoplasm where it acts as a cellular cytoskeleton, and is also involved in pathways at the blood-brain barrier, immune cell transmigration, regulation of actin cytoskeleton by Rho GTPases and development Slit-Robo signalling.

Model	STJ91464
Host	Rabbit
Reactivity	Human, Mouse, Rat
Applications	ELISA, IHC, WB
Immunogen	Synthesized peptide derived from human beta actin.
Immunogen Region	N-terminal
Gene ID	60
Gene Symbol	ACTB
Dilution range	WB 1:1000-1:4000IHC 1:100-1:300ELISA 1:20000
Specificity	Beta actin polyclonal antibody detects endogenous levels of beta actin protein.
Purification	The antibody was affinity-purified from rabbit antiserum by affinity-chromatography using epitope-specific immunogen.
Note	For Research Use Only (RUO).
Protein Name	Actin, cytoplasmic 1 Beta-actin Actin, cytoplasmic 1, N-terminally processed
Molecular Weight	42 kDa

Clonality	Polyclonal
Conjugation	Unconjugated
Isotype	IgG
Formulation	Liquid in PBS containing 50% glycerol, 0.5% BSA and 0.02% sodium azide.
Concentration	1 mg/ml
Storage Instruction	Store at -20°C, and avoid repeat freeze-thaw cycles.
Database Links	HGNC:132OMIM:102630
Alternative Names	Actin, cytoplasmic 1 Beta-actin Actin, cytoplasmic 1, N-terminally processed
Function	Actins are highly conserved proteins that are involved in various types of cell motility and are ubiquitously expressed in all eukaryotic cells.
Cellular Localization	Cytoplasm, cytoskeleton
Post-translational Modifications	MICALs (MICAL1, MICAL2 or MICAL3) will oxidise amino acids Met-44 and Met-47 to form methionine sulfoxide, which in turn promotes the depolymerisation of actin filaments. MICAL1 and MICAL2 will produce the (R)-S-oxide form, which is reverted by MSRB1 and MSRB2, which promote actin repolymerization. Monomethylation at Lys-84 (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. Monomeric actin is cross-linked by V.cholerae toxins RtxA and VgrG1 during infection. Bacterial toxins mediate the cross-link between Lys-50 of one monomer and Glu-270 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.