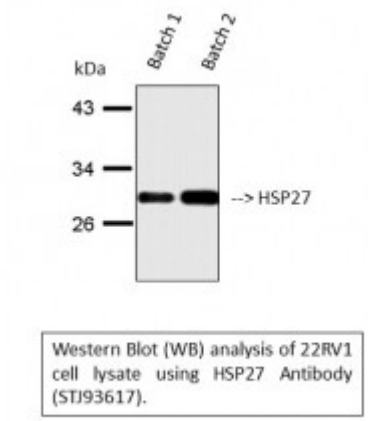
Anti-HSP27 antibody



Western Blot (WB) analysis of 22RV1 cell lysate using HSP27 Antibody (STJ93617).

Description	HSP27 is a protein encoded by the HSPB1 gene which is approximately 22,7 kDa. HSP27 is localised to the cytoplasm and nucleus. It is involved in CDK-mediated phosphorylation and removal of Cdc6, RET signalling, the MAPK signalling pathway, apoptosis and the survival caspase cascade. It is a small heat shock protein which functions as a molecular chaperone maintaining denatured proteins in a folding-competent state. Through its molecular chaperone activity, it may regulate numerous biological processes including the phosphorylation and the axonal transport of neurofilament proteins. It also plays a role in stress resistance and actin organization. HSP27 is expressed in all tissues with the highest levels found in the heart and striated and smooth muscle. Mutations in the HSPB1 gene may result in Charcot-Marie-Tooth disease. STJ93617 was affinity-purified from rabbit antiserum by affinity-chromatography using epitope-specific immunogen. This polyclonal antibody detects endogenous levels of HSP27 protein.
Model	STJ93617
Host	Rabbit
Reactivity	Human, Mouse, Rat
Applications	ELISA, IHC, WB
Immunogen	Synthesized peptide derived from human HSP27 around the non-phosphorylation site of S15.
Immunogen Region	20-100 aa
Gene ID	3315
Gene Symbol	HSPB1

Dilution range	WB 1:500-1:2000IHC 1:100-1:300ELISA 1:10000
Specificity	HSP27 Polyclonal Antibody detects endogenous levels of HSP27 protein.
Tissue Specificity	Detected in all tissues tested: skeletal muscle, heart, aorta, large intestine, small intestine, stomach, esophagus, bladder, adrenal gland, thyroid, pancreas, testis, adipose tissue, kidney, liver, spleen, cerebral cortex, blood serum and cerebrospinal fluid. Highest levels are found in the heart and in tissues composed of striated and smooth muscle.
Purification	The antibody was affinity-purified from rabbit antiserum by affinity-chromatography using epitope-specific immunogen.
Note	For Research Use Only (RUO).
Protein Name	Heat shock protein beta-1 HspB1 28 kDa heat shock protein Estrogen-regulated 24 kDa protein Heat shock 27 kDa protein HSP 27 Stress-responsive protein 27 SRP27
Molecular Weight	27 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:5246OMIM:602195
Alternative Names	Heat shock protein beta-1 HspB1 28 kDa heat shock protein Estrogen-regulated 24 kDa protein Heat shock 27 kDa protein HSP 27 Stress-responsive protein 27 SRP27
Function	Small heat shock protein which functions as a molecular chaperone probably maintaining denatured proteins in a folding-competent state . Plays a role in stress resistance and actin organization . Through its molecular chaperone activity may regulate numerous biological processes including the phosphorylation and the axonal transport of neurofilament proteins .
Cellular Localization	Cytoplasm Nucleus Cytoplasm, cytoskeleton, spindle. Cytoplasmic in interphase cells. Colocalizes with mitotic spindles in mitotic cells. Translocates to the nucleus during heat shock and resides in sub-nuclear structures known as SC35 speckles or nuclear splicing speckles.
Post-translational Modifications	Phosphorylated upon exposure to protein kinase C activators and heat shock . Phosphorylation by MAPKAPK2 and MAPKAPK3 in response to stress dissociates HSPB1 from large small heat-shock protein (sHsps) oligomers and impairs its chaperone activity and ability to protect against oxidative stress effectively. Phosphorylation by MAPKAPK5 in response to PKA stimulation induces F-actin rearrangement .