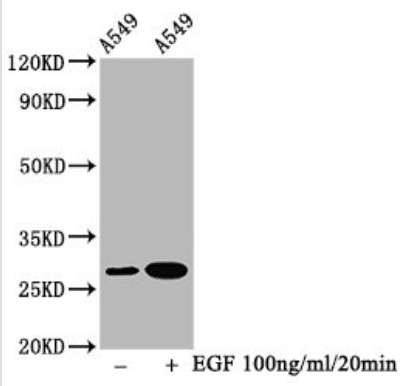
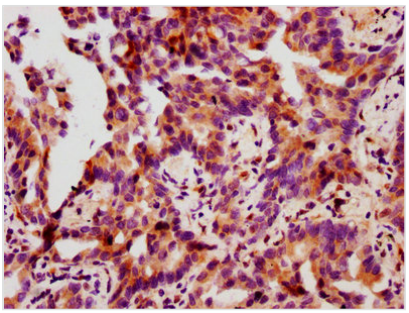
Phospho-HSPB1 (S78) Recombinant Monoclonal Antibody

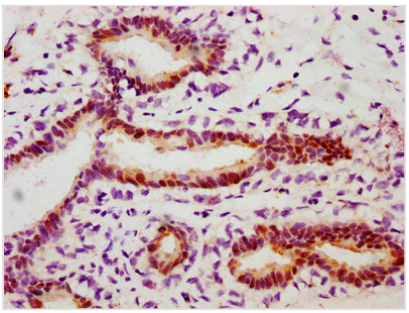
Product Code	CSB-RA010833A78phHU
Abbreviation	Heat shock protein beta-1
Storage	Upon receipt, store at -20°C or -80°C. Avoid repeated freeze.
Uniprot No.	P04792
Immunogen	A synthesized peptide derived from Human Phospho-HSPB1 (S78)
Species Reactivity	Human
Tested Applications	ELISA, WB, IHC; Recommended dilution: WB:1:500-1:5000, IHC:1:50-1:200
Relevance	Small heat shock protein which functions as a molecular chaperone probably maintaining denatured proteins in a folding-competent state (PubMed:10383393, PubMed:20178975). Plays a role in stress resistance and actin organization (PubMed:19166925). Through its molecular chaperone activity may regulate numerous biological processes including the phosphorylation and the axonal transport of neurofilament proteins (PubMed:23728742).
Form	Liquid
Conjugate	Non-conjugated
Storage Buffer	Rabbit IgG in phosphate buffered saline , pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol.
Purification Method	Affinity-chromatography
Isotype	Rabbit IgG
Clonality	Monoclonal
Alias	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, HSPB1, HSP27, HSP28
Immunogen Species	Homo sapiens (Human)
Research Area	Signal Transduction
Gene Names	HSPB1
Clone No.	2D8
Image	



Western Blot
Positive WB detected in A549 whole cell lysate(treated with EGF or not)
All lanes Phospho-HSPB1 antibody at 1.5µg/ml
Secondary
Goat polyclonal to rabbit IgG at 1/50000 dilution
Predicted band size: 27 KDa
Observed band size: 27 KDa



IHC image of CSB-RA010833A78phHU diluted at 1:100 and staining in paraffin-embedded human lung cancer performed on a Leica BondTM system. After dewaxing and hydration, antigen retrieval was mediated by high pressure in a citrate buffer (pH 6.0). Section was blocked with 10% normal goat serum 30min at RT. Then primary antibody (1% BSA) was incubated at 4? overnight. The primary is detected by a biotinylated secondary antibody and visualized using an HRP conjugated SP system.



IHC image of CSB-RA010833A78phHU diluted at 1:100 and staining in paraffin-embedded human breast cancer performed on a Leica BondTM system. After dewaxing and hydration, antigen retrieval was mediated by high pressure in a citrate buffer (pH 6.0). Section was blocked with 10% normal goat serum 30min at RT. Then primary antibody (1% BSA) was incubated at 4? overnight. The primary is detected by a biotinylated secondary antibody and visualized using an HRP conjugated SP system.

Description

In the quest to manufacture the phospho-HSPB1 (S78) recombinant monoclonal antibody, the initial phase involves the retrieval of genes encoding the HSPB1 antibody from rabbits previously exposed to a synthesized peptide originating from the human HSPB1 protein phosphorylated at S78. These antibody genes are then adeptly integrated into specialized expression vectors. Subsequently, the genetically modified vectors are thoughtfully introduced into host suspension cells, where they are diligently cultivated to stimulate the production and secretion of antibodies. Following this growth phase, the phospho-HSPB1 (S78) recombinant monoclonal antibody is subjected to a rigorous purification process employing affinity chromatography techniques, effectively isolating the antibody from the surrounding cell culture supernatant. Lastly, the antibody's efficacy is comprehensively assessed through a diverse range of assays, encompassing ELISA, WB, and IHC tests, thereby confirming its ability to interact effectively with the human HSPB1 protein phosphorylated at S78.

Phosphorylation of HSPB1 at S78 is a critical regulatory mechanism that allows cells to respond to stress, maintain protein quality control, and promote cell

survival. Dysregulation of this phosphorylation event can have significant implications in various diseases, including cancer and neurodegenerative disorders.