

HSP27 Antibody (Center)

Purified Rabbit Polyclonal Antibody (Pab) Catalog # AP7199e

Product Information

Application WB, IHC-P, E **Primary Accession** P04792

Other Accession <u>P42930</u>, <u>P14602</u>, <u>Q3T149</u>

Reactivity Human

Predicted Bovine, Mouse, Rat

HostRabbitClonalityPolyclonalIsotypeRabbit IgGClone NamesRB19530Calculated MW22783Antigen Region108-136

Additional Information

Gene ID 3315

Other 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, HSPB1, HSP27, HSP28

Target/Specificity This HSP27 antibody is generated from rabbits immunized with a KLH

conjugated synthetic peptide between 108-136 amino acids from the Central

region of human HSP27.

Dilution WB~~1:1000 IHC-P~~1:100~500 E~~Use at an assay dependent concentration.

Format Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide.

This antibody is prepared by Saturated Ammonium Sulfate (SAS) precipitation

followed by dialysis against PBS.

Storage Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store

at -20°C in small aliquots to prevent freeze-thaw cycles.

Precautions HSP27 Antibody (Center) is for research use only and not for use in diagnostic

or therapeutic procedures.

Protein Information

Name HSPB1

Synonyms HSP27, HSP28

Function

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).

Cellular Location

Cytoplasm. Nucleus Cytoplasm, cytoskeleton, spindle Note=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.

Tissue Location

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.

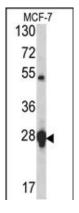
Background

In response to adverse changes in their environment, cells from many organisms increase the expression of a class of proteins referred to as heat shock or stress proteins. HSBP1 exhibits rapid increased phosphorylation in response to various mitogens, tumor promoters (e.g. phorbol esters) and calcium ionophores, and high levels are associated with carcinoma of the breast and with endometrial adenocarcinomas. Heat shock of HeLa cell cultures, or treatment with arsenite, phorbol ester, or tumor necrosis factor, causes a rapid phosphorylation of preexisting HSBP1, with Ser82 as the major site and Ser78 the minor site of phosphorylation. HSBP1 may exert phosphorylation-activated functions linked with growth signaling pathways in unstressed cells. A homeostatic function at this level could protect cells from adverse effects of signal transduction systems which may be activated inappropriately during stress.

References

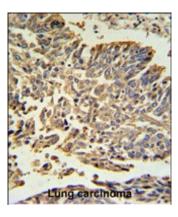
Wano, C., et al., Exp. Cell Res. 298(2):584-592 (2004). Evgrafov, O.V., et al., Nat. Genet. 36(6):602-606 (2004). Song, H., et al., Biochem. Biophys. Res. Commun. 314(1):143-150 (2004). Chauhan, D., et al., Blood 102(9):3379-3386 (2003). Van Why, S.K., et al., J. Am. Soc. Nephrol. 14(1):98-106 (2003).

Images



Western blot analysis of HSP27 antibody (Center) (Cat.# AP7199e) in MCF-7 cell line lysates (35ug/lane). HSP27 (arrow) was detected using the purified Pab.

Hsp 27 Antibody (Center) (Cat.# AP7199e) IHC analysis in formalin fixed and paraffin embedded human Lung



carcinoma followed by peroxidase conjugation of the secondary antibody and DAB staining. This data demonstrates the use of the Hsp 27 Antibody (Center) for immunohistochemistry. Clinical relevance has not been evaluated.

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.