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HSP27 Antibody

Purified Mouse Monoclonal Antibody
Catalog # AO1563a

Product Information

Application	WB, IHC, FC, ICC, E
Primary Accession	P04792
Reactivity	Human, Rat
Host	Mouse
Clonality	Monoclonal
Clone Names	5D7
Isotype	IgG1
Calculated MW	22783
Description	The protein encoded by this gene is induced by environmental stress and developmental changes. The encoded protein is involved in stress resistance and actin organization and translocates from the cytoplasm to the nucleus upon stress induction. Defects in this gene are a cause of Charcot-Marie-Tooth disease type 2F (CMT2F) and distal hereditary motor neuropathy (dHMN). (provided by RefSeq) 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.
Immunogen	Purified recombinant fragment of human HSP27 expressed in E. Coli.
Formulation	Ascitic fluid containing 0.03% sodium azide.

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
Dilution	WB~~1/500 - 1/2000 IHC~~1/200 - 1/1000 FC~~1/200 - 1/400 ICC~~N/A E~~1/10000
Storage	Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.
Precautions	HSP27 Antibody 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.

References

1. Clin Cancer Res. 2008 Dec 15;14(24):8279-87. 2. Cell Signal. 2009 Jan;21(1):143-50.

Images

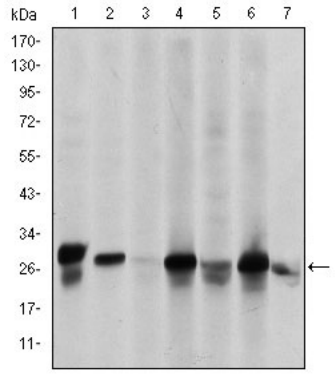


Figure 1: Western blot analysis using HSP27 mouse mAb against Hela (1), A549 (2), Jurkat (3), A431 (4), HEK293(5), HepG2 (6) and PC-12 (7) cell lysate.

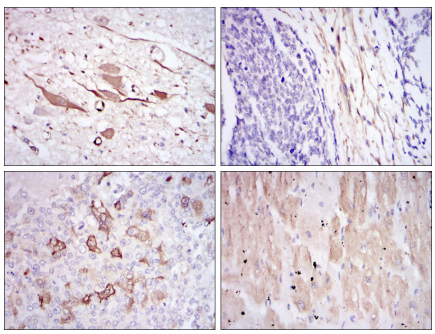
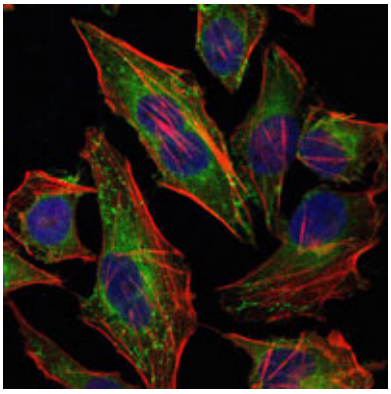


Figure 2: Immunohistochemical analysis of paraffin-embedded brain tissues (left) and esophageal cancer tissues (right) using HSP27 mouse mAb with DAB staining.

Figure 3: Immunohistochemical analysis of paraffin-embedded breast cancer tissues (left) and cardiac muscle tissues (right) using HSP27 mouse mAb with DAB staining.

Figure 4: Immunofluorescence analysis of Hela cells using HSP27 mouse mAb (green). Blue: DRAQ5 fluorescent DNA dye. Red: Actin filaments have been labeled with Alexa



Fluor-555 phalloidin.

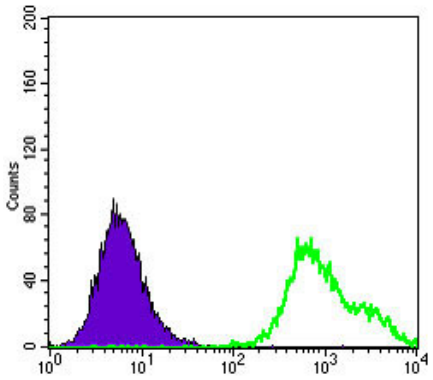


Figure 5: Flow cytometric analysis of HepG2 cells using HSP27 mouse mAb (green) and negative control (purple).