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Datasheet for ABIN2481421
anti-HSP27 antibody (Biotin)

5 Images

Overview

Quantity:	100 µg
Target:	HSP27 (HSPB1)
Reactivity:	Human
Host:	Mouse
Clonality:	Monoclonal
Conjugate:	This HSP27 antibody is conjugated to Biotin
Application:	Western Blotting (WB), Immunohistochemistry (IHC), Immunofluorescence (IF), Flow Cytometry (FACS), Immunoprecipitation (IP), Immunocytochemistry (ICC)

Product Details

Immunogen:	HSP27 peptide
Clone:	8A7
Isotype:	IgG1 kappa
Specificity:	Detects ~25 kDa or ~27 kDa. Recognizes HSP25 and HSP27, cross reacts with alpha B crystallin.
Cross-Reactivity:	Cow, Dog, Guinea Pig, Hamster, Human, Mouse, Rat, Sheep
Purification:	Protein G Purified

Target Details

Target:	HSP27 (HSPB1)
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Target Details

Alternative Name: HSP27 ([HSPB1 Products](#))

Background: HSP25 is the mouse homologue of the human HSP27 protein, a member of the small heat shock protein family comprised of a diverse group of proteins from ~15 to >30 kDa(1). The basic structure of most sHSPs is a homologous and highly conserved amino acid sequence, with an α -crystallin-domain at the C-terminus and the WD/EPF domain at the less conserved N-terminus. This N-terminus is essential for the development of high molecular oligomers (2, 3). HSP27-oligomers consist of stable dimers formed by as many as 8-40 HSP27 protein monomers (4). The oligomerization status is connected with the chaperone activity: aggregates of large oligomers have high chaperone activity, whereas dimers have no chaperone activity (5). HSP27 is localized to the cytoplasm of unstressed cells but can redistribute to the nucleus in response to stress, where it may function to stabilize DNA and/or the nuclear membrane. It can be rapidly phosphorylated in response to physiological stimuli relevant to the cell type examined. Thus, HSP27 has been suggested to be an important intermediate in second messenger-mediated signaling pathways (6). Other functions include chaperone activity (as mentioned above), thermo-tolerance in vivo, inhibition of apoptosis, and signal transduction. Specifically, in vitro, it acts as an ATP-independent chaperone by inhibiting protein aggregation and by stabilizing partially denatured proteins, which ensures refolding of the HSP70 complex. HSP27 is also involved in the apoptotic signaling pathway because it interferes with the activation of cytochrome c/Apaf-1/dATP complex, thereby inhibiting the activation of procaspase-9. It is also hypothesized that HSP27 may serve some role in cross-bridge formation between actin and myosin (7). And finally, HSP27 is also thought to be involved in the process of cell differentiation. The up-regulation of HSP27 correlates with the rate of phosphorylation and with an increase of large oligomers. It is possible that HSP27 may play a crucial role in termination of growth (8). For more information visit our HSP27 Scientific Resource Guide at <http://www.HSP27.com>.

Gene ID: 3315

NCBI Accession: [NP_001532](#)

Pathways: [MAPK Signaling](#), [Regulation of Actin Filament Polymerization](#), [Signaling Events mediated by VEGFR1 and VEGFR2](#), [Negative Regulation of intrinsic apoptotic Signaling](#), [VEGF Signaling](#)

Application Details

Application Notes:

- WB (1:5000)
- ICC/IF (1:200)
- IHC (1:100)

Application Details

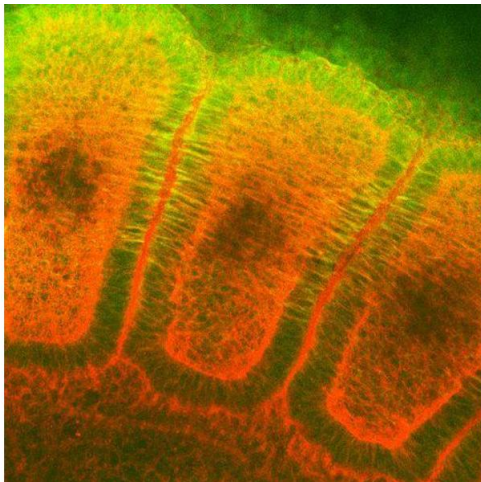
- optimal dilutions for assays should be determined by the user.

Comment:	A 1:5000 dilution of ABIN2481421 was sufficient for detection of HSP27 in 20 µg of HeLa cell lysate by ECL immunoblot analysis.
Restrictions:	For Research Use only

Handling

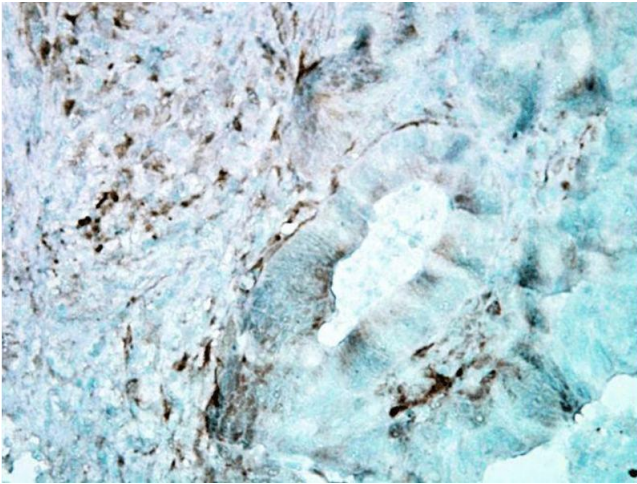
Format:	Liquid
Concentration:	1 mg/mL
Buffer:	PBS, 50 % glycerol, 0.09 % sodium azide, Storage buffer may change when conjugated
Preservative:	Sodium azide
Precaution of Use:	This product contains Sodium azide: a POISONOUS AND HAZARDOUS SUBSTANCE which should be handled by trained staff only.
Storage:	4 °C
Storage Comment:	Conjugated antibodies should be stored at 4°C

Images



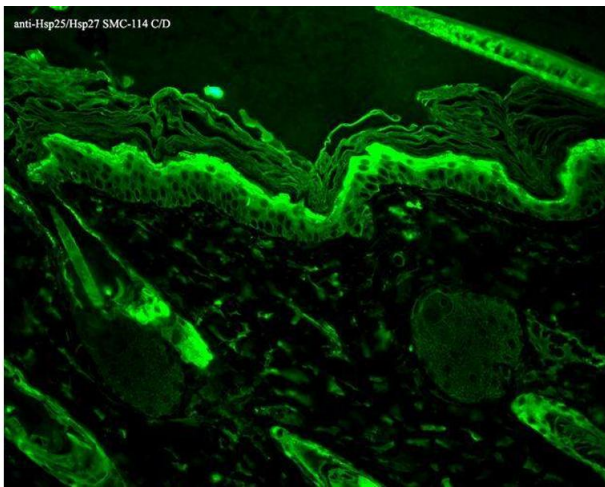
Immunoprecipitation

Image 1. Immunohistochemistry analysis using Mouse Anti-Hsp27 Monoclonal Antibody, Clone 8A7 . Tissue: embryo somites. Species: Rat. Primary Antibody: Mouse Anti-Hsp27 Monoclonal Antibody at 1:1000. Secondary Antibody: FITC Goat Anti-Mouse (green). Counterstain: Rhodamine-phalloidin labeled actin (red). Courtesy of: Mike Welsh, Umich.



Immunohistochemistry

Image 2. Immunohistochemistry analysis using Mouse Anti-Hsp27 Monoclonal Antibody, Clone 8A7 . Tissue: colon carcinoma. Species: Human. Fixation: Formalin. Primary Antibody: Mouse Anti-Hsp27 Monoclonal Antibody at 1:5000 for 12 hours at 4°C. Secondary Antibody: Biotin Goat Anti-Mouse at 1:2000 for 1 hour at RT. Counterstain: Mayer Hematoxylin (purple/blue) nuclear stain at 200 µl for 2 minutes at RT. Localization: Inflammatory cells. Magnification: 40x.



Immunohistochemistry

Image 3. Immunohistochemistry analysis using Mouse Anti-Hsp27 Monoclonal Antibody, Clone 8A7 . Tissue: backskin. Species: Mouse. Fixation: Bouin's Fixative and paraffin-embedded. Primary Antibody: Mouse Anti-Hsp27 Monoclonal Antibody at 1:100 for 1 hour at RT. Secondary Antibody: FITC Goat Anti-Mouse (green) at 1:50 for 1 hour at RT. Localization: Epidermis.

Please check the [product details page](#) for more images. Overall 5 images are available for ABIN2481421.