

Hsp27 Antibody
Rabbit Polyclonal Antibody
Catalog # ABV10070**Specification**

Hsp27 Antibody - Product Information

Application	WB
Primary Accession	P42930
Reactivity	Rat
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Calculated MW	22893

Hsp27 Antibody - Additional Information

Application & Usage	Western blotting (1-2 µg/ml), immunoprecipitation (5-10 µg/ml), immunocytochemistry (10-15 µg/ml), and ELISA (1 µg/ml). However, the optimal conditions should be determined individually. The antibody detects a 27 kDa protein, corresponding to the apparent molecular mass of Hsp27 on SDS-PAGE immunoblots, in samples from human, monkey, dog (weakly) and pig (weakly) origins.
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Other Names

HSPB1, CMT2F, DKFZp586P1322, HS.76067, HSP27, HSP28, Hsp25

Target/Specificity

Hsp27

Antibody Form

Liquid

Appearance

Colorless liquid

Formulation

100 µg (0.5 mg/ml) affinity purified rabbit polyclonal antibody in phosphate buffered saline (PBS), pH 7.2, containing 30% glycerol, 0.5% BSA, 0.01% thimerosal.

Handling

The antibody solution should be gently mixed before use.

Reconstitution & Storage

-20 °C

Background Descriptions

Precautions

Hsp27 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Hsp27 Antibody - Protein Information

Name Hspb1

Synonyms Hsp27

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 Location

Cytoplasm {ECO:0000250|UniProtKB:P04792}. Nucleus {ECO:0000250|UniProtKB:P04792}. Cytoplasm, cytoskeleton, spindle {ECO:0000250|UniProtKB:P04792}. 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 {ECO:0000250|UniProtKB:P04792}

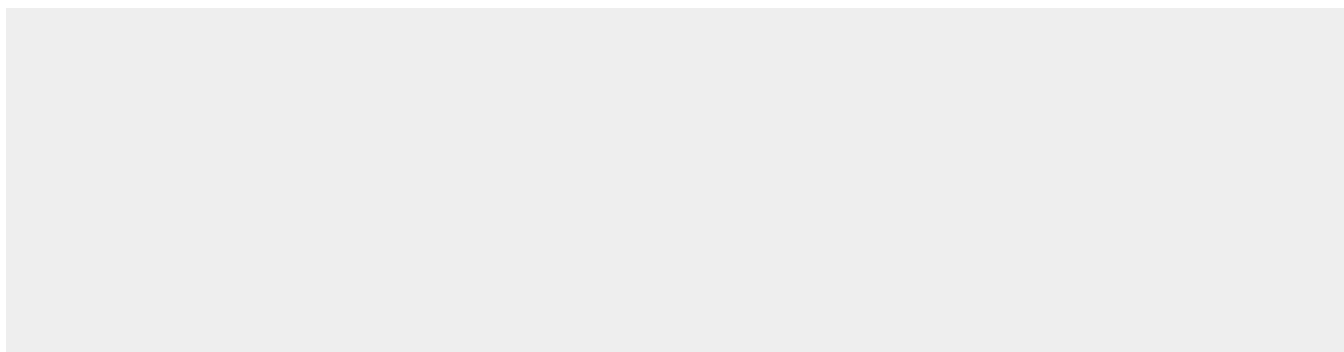
Tissue Location

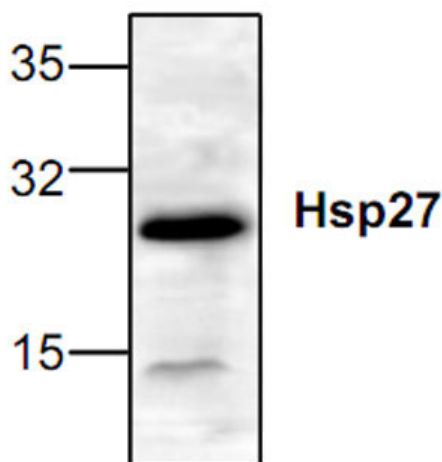
Expressed in a variety of tissues. High levels in lung, adrenal, xiphoid, adipose tissue, heart and striated and smooth muscle, lower levels in the CNS. Adult levels are much higher in the slow-twitch soleus muscle than in the fast-twitch rectus femoris and extensor digitorum muscles.

Hsp27 Antibody - Protocols

Provided below are standard protocols that you may find useful for product applications.

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

Hsp27 Antibody - Images



Western blot analysis of Hsp27 expression in rat tissue lysate.

Hsp27 Antibody - Background

Human Hsp27, mouse Hsp25 and $\alpha\beta$ -crystallin are part of a diverse family of small heat shock proteins which are produced in all organisms. They function as chaperone-like proteins by binding unfolded polypeptides and preventing uncontrolled protein aggregation. Hsp27 is believed to exist mainly as oligomers of as many as 8-40 Hsp27 protein monomers in cells and data suggests that the large oligomers of Hsp27 have a chaperone-like activity by serving as a site where unfolding proteins may bind until ATP and Hsp70-dependent refolding can occur. Hsp27 is believed to protect cells by enhancing cellular glutathione levels and elevated glutathione levels have been measured in cells overexpressing Hsp27. Data from studies using wild-type Hsp27 and mutant forms in which the serine phosphorylation sites were mutated to alanines, glycines or aspartates, have shown that cellular glutathione levels depend on the oligomerization of Hsp27. Recent findings indicate that Hsp27 is also a negative regulator of cytochrome c-dependent activation of procaspase-3.