

**HSP22 Antibody**  
**HSP22 Antibody, Clone 3C12-H11**  
**Catalog # ASM10134****Specification**

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**HSP22 Antibody - Product Information**

Application	<b>IHC, WB</b>
Primary Accession	<a href="#">O9UJY2</a>
Other Accession	<a href="#">NP_055180.2</a>
Host	<b>Mouse</b>
Isotype	<b>IgG1 Kappa</b>
Reactivity	<b>Human, Mouse, Rat</b>
Clonality	<b>Monoclonal</b>
Format	<b>APC</b>

**Description**

Mouse Anti-Human HSP22 Monoclonal IgG1 Kappa

**Target/Specificity**

Detects ~22kDa. Detects endogenous and exogenous HSP22 in monomeric, dimeric and tetrameric forms in WB. Does not cross react with alpha crystallin.

**Other Names**

Alpha crystallin C chain Antibody, CMT2L Antibody, CRYAC Antibody, DHMN2 Antibody, H11 Antibody, Heat shock 22kDa protein 8 Antibody, HMN2 Antibody, HSB8 Antibody, HSPB8 Antibody

**Immunogen**

His-tagged human recombinant HSP22

**Purification**

Protein G Purified

Storage **-20°C****Storage Buffer**

PBS pH7.4, 50% glycerol, 0.09% sodium azide

Shipping Temperature **Blue Ice or 4°C****Certificate of Analysis**

1 µg/ml of SMC-187 was sufficient for detection of HSP22 in 20 µg of whole rat tissue extract by ECL immunoblot analysis using Goat anti-mouse IgG:HRP as the secondary antibody.

**Cellular Localization**

Cytoplasm | Nucleus

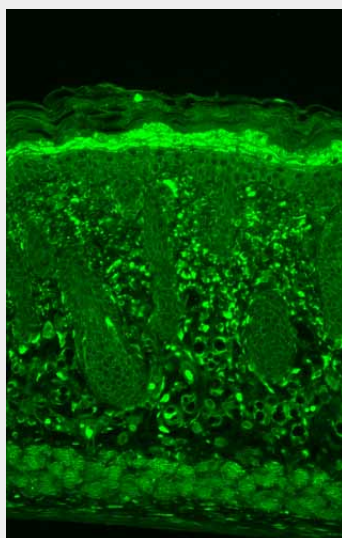
**HSP22 Antibody - Protocols**

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

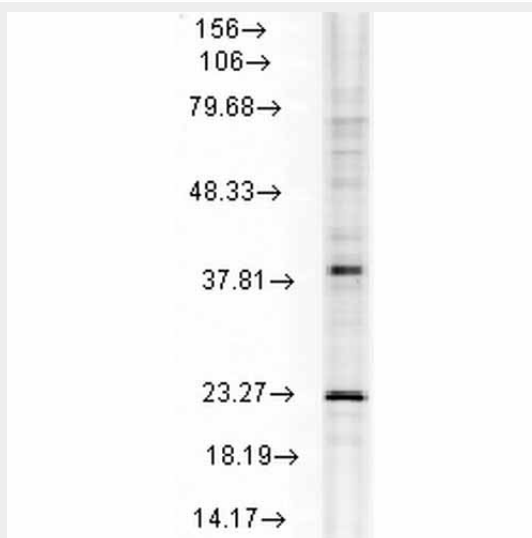
- [Western Blot](#)
- [Blocking Peptides](#)

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

### HSP22 Antibody - Images



Immunohistochemistry analysis using Mouse Anti-Hsp22 Monoclonal Antibody, Clone 3C12-H11 (ASM10134). Tissue: backskin. Species: Mouse. Fixation: Bouin's Fixative and paraffin-embedded. Primary Antibody: Mouse Anti-Hsp22 Monoclonal Antibody (ASM10134) at 1:100 for 1 hour at RT. Secondary Antibody: FITC Goat Anti-Mouse (green) at 1:50 for 1 hour at RT. Localization: Granular layer of the epidermis. Some dermal staining.



Western Blot analysis of Rat Cell lysates showing detection of Hsp22 protein using Mouse Anti-Hsp22 Monoclonal Antibody, Clone 3C12-H11 (ASM10134). Load: 15 µg. Block: 1.5% BSA for 30 minutes at RT. Primary Antibody: Mouse Anti-Hsp22 Monoclonal Antibody (ASM10134) at 1:1000 for 2 hours at RT. Secondary Antibody: Sheep Anti-Mouse IgG: HRP for 1 hour at RT.

### HSP22 Antibody - Background

HSP27s belong to an abundant and ubiquitous family of small heat shock proteins (sHSP). It is an important HSP found in both normal human cells and cancer cells. The basic structure of most sHSPs is a homologous and highly conserved amino acid sequence, with an  $\alpha$ -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 (1, 2). HSP27-oligomers consist of stable dimers formed by as many as 8-40 HSP27 protein monomers (3). The oligomerization status is connected with the chaperone activity: aggregates of large oligomers have high chaperone activity, whereas dimers have no chaperone activity (4). 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. 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 (5). 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 (6).

#### **HSP22 Antibody - References**

1. Kappe G., et al. (2001) *Biochem Biophys Acta* 1520: 1-6.
2. Benndorf R., et al. (2001) *J Biol Chem* 276: 26753-26761.
3. Sun X., et al. (2004) *J Biol Chem* 279: 2394-2402.
4. Kim M.V., et al. (2004) *Biochem Biophys Res Commun* 325: 649-652.
5. Wilhelmus M.M., et al. (2006) *Acta Neuropathol (Berl)* 111: 139-149.