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Monoclonal Antibody to HSP22 - Purified

Alternate names: Alpha crystallin C chain, CMT2L, CRYAC, DHMN2, H11, HMN2, HSB8, Heat shock 22kDa

protein 8, HspB8

Catalog No.: AM20059PU-N

Quantity: 0.1 mg
Concentration: 1.0 mg/ml

Background: Hsp22 (HSPB8) is a 196-amino acid protein that is a member of the small heat shock

protein super-family and the human protein is most closely related to Hsp27.

Similar to most other sHSPs, Hsp22 is predominately transcribed in skeletal muscle and heart, as well as the placenta (1). Hsp22 is a monomeric protein which interacts with

HSPB1. It displays temperature-dependent chaperone activity.

In a two hybrid screen, HspB8 interacted preferentially with a triple aspartate form of Hsp27 which mimics Hsp27 phosphorylated at Ser15, Ser78, and Ser82, as compared to wild-type Hsp27 (2). HSPB8 has two binding domains (N and C Terminal) that are specific for different binding partners, and has the ability to bind itself and other sHSPs (3). The chaperone-like activity is of great importance to the function of Hsp22 in various processes

including proliferation, apoptosis and macroautophagy (4).

Mutations in the HSPB8 gene are associated with the inherited peripheral neurpathies, autosomal dominant distal hereditary motor neuropathy type IIA (dSMA) and axonal

Charcot-Marie-Tooth disease type 2L (CMT2L) (5).

Uniprot ID: <u>Q9UJY2</u>

NCBI: NP 055180.2

GenelD: <u>2030</u>

Host / Isotype: Mouse / IgG1

Recommended Isotype Controls:

SM10P (for use in human samples), SM20P (for use in rat samples), AM03095PU-N

Clone: 3C12-H11

Immunogen: His-tagged Human recombinant HSP22

Format: State: Liquid purified IgG fraction.
Purification: Protein G Chromatography.

Buffer System: PBS, pH 7.4 containing 50% Glycerol as stabilizer and 0.09% Sodium Azide

as preservative.

Applications: ELISA.

Western blot (1/2000).

1 μg/mL 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.

Immunohistochemistry.

For research and in vitro use only. Not for diagnostic or therapeutic work.

Material Safety Datasheets are available at www.acris-antibodies.com or on request. Acris Antibodies is now part of the OriGene family. Learn more at www.origene.com

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GelbH

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AM20059PU-N: Monoclonal Antibody to HSP22 - Purified

Other applications not tested. Optimal dilutions are dependent on conditions and should

be determined by the user.

Specificity: Detects endogenous and exogenous hsp22 in monomeric, dimeric and tetrameric (weak)

forms in Western Blot.

Does not cross react with alpha Crystalline. Exogenous HSP22 detected in dimeric form.

Store the antibody undiluted at 2-8°C for one month or (in aliquots) at -20°C for longer.

Avoid repeated freezing and thawing. Shelf life: one year from despatch.

General Readings: 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.

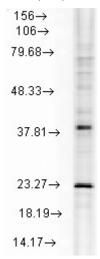
4. Kim M.V., et al. (2004) Biochem Biophys Res Commun 325: 649-652.

5. Wilhelmus M.M., et al. (2006) Acta Neuropathol (Berl) 111: 139-149.

Pictures: Western blot analysis of Hsp22 in rat

tissue mix using a 1:1000 dilution of the

antibody



IHC analysis of Hsp22, tested on mouse backskin sections. Courtesy of Dr. Turksen, Ottawa Hospital Research Institute.

