

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:	<p>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.</p> <p>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).</p> <p>Mutations in the HSPB8 gene are associated with the inherited peripheral neuropathies, autosomal dominant distal hereditary motor neuropathy type IIA (dSMA) and axonal Charcot-Marie-Tooth disease type 2L (CMT2L) (5).</p>
Uniprot ID:	Q9UIY2
NCBI:	NP_055180.2
GeneID:	2030
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.

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.

Storage: 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.

