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Polyclonal Anti-Hsp27 Picoband™ Antibody

Catalog Number: PB9237

Description

Gene Name	heat shock 27kDa protein 1
Recommended Protein Name	Heat shock protein beta-1
Lot No.	0921412Da503785
Size	100μg/vial
Form	lyophilized
Ig type	Rabbit IgG
Specificity	No cross reactivity with other proteins.
Purification	Immunogen affinity purified.
Species	**Reacts with:** human
Immunogen	E.coli-derived human Hsp27 recombinant protein (Position: M1-K205). Human Hsp27 shares 83% amino acid (aa) sequence identity with mouse Hsp27.
Contents	Each vial contains 5mg BSA, 0.9mg NaCl, 0.2mg Na_2HPO_4, 0.05mg NaN_3.

Application

	Concentration	Tested Species	Antigen Retrieval
Western blot	0.1-0.5μg/ml	Hu	-
Immunohistochemistry (Paraffin-embedded Section)	0.5-1μg/ml	Hu	By Heat
Immunohistochemistry (Frozen Section)	0.5-1μg/ml	Hu	-

WB: The detection limit for Hsp27 is approximately 0.25ng/lane under reducing conditions.

Tested Species: In-house tested species with positive results.

By Heat: Boiling the paraffin sections in 10mM citrate buffer, pH6.0, for 20mins is required for the staining of formalin/paraffin sections.

Other applications have not been tested.

Optimal dilutions should be determined by end users.

Preparation and storage

Reconstitution: 0.2ml of distilled water will yield a concentration of 500μg/ml.

Storage: At -20˚C for one year. After reconstitution, at 4˚C for one month. It can also be aliquotted and stored frozen at -20˚C for a longer time.
Avoid repeated freezing and thawing.

Relevant detection systems

Boster provides a series of assays reacted with primary antibodies. Antibody can be supported by chemiluminescence kit EK1002 in WB, supported by SA1022 in IHC(P) and IHC(F).

Background

HSPB1(Heat shock 27kDa protein 1), also known as HSP27, is a protein that in humans is encoded by the HSPB1 gene. HSP27 gene is mapped to 7q11.23. The protein encoded by this gene is induced by environmental stress and developmental changes. The encoded protein is involved in stress resistance and actin organization and translocates from the cytoplasm to the nucleus upon stress induction. Defects in this gene are a cause of Charcot-Marie-Tooth disease type 2F (CMT2F) and distal hereditary motor neuropathy (dHMN).

Reference

1. Ackerley, S., James, P. A., Kalli, A., French, S., Davies, K. E., Talbot, K. A mutation in the small heat-shock protein HSPB1 leading to distal hereditary motor neuronopathy disrupts neurofilament assembly and the axonal transport of specific cellular cargoes. Hum. Molec. Genet. 15: 347-354, 2006.
2. d'Ydewalle, C., Krishnan, J., Chiheb, D. M., Van Damme, P., Irobi, J., Kozikowski, A. P., Vanden Berghe, P., Timmerman, V., Robberecht, W., Van Den Bosch, L. HDAC6 inhibitors reverse axonal loss in a mouse model of mutant HSPB1-induced Charcot-Marie-Tooth disease. Nature Med. 17: 968-974, 2011.
3. Stock, A. D., Spallone, P. A., Dennis, T. R., Netski, D., Morris, C. A., Mervis, C. B., Hobart, H. H. Heat shock protein 27 gene: chromosomal and molecular location and relationship to Williams syndrome. Am. J. Med. Genet. 120A: 320-325, 2003.