

Anti-Human Heat Shock Protein 27 Purified

Catalog Number: 14-9112

Also known as: heat shock protein beta-1, HSPB1, Hsp27

RUO: For Research Use Only. Not for use in diagnostic procedures.

Product Information

Contents: Anti-Human Heat Shock Protein 27 Purified
Catalog Number: 14-9112
Clone: STRSN
Concentration: 0.5 mg/mL
Host/Isotype: Mouse IgG1, kappa

REF



Formulation: aqueous buffer, 0.09% sodium azide, may contain carrier protein/stabilizer
Temperature Limitation: Store at 2-8°C.

Batch Code: Refer to vial

Use By: Refer to vial

Contains sodium azide

Description

The monoclonal antibody STRSN recognizes human heat shock protein 27 (HSP27). The heat shock proteins are a large family of proteins that are induced in response to stressors such as changing temperatures, cytokine levels, and presence of various chemicals. Heat shock proteins serve as molecular chaperones, binding to other proteins to maintain proper protein structure or by folding denatured proteins and preventing activation of caspases that could lead to apoptosis. Unlike the larger HSP proteins, HSP27 belongs to a unique subgroup that is involved in apoptosis regulation. Expression of HSP27 is constitutive, but upon stress HSP27 is upregulated and can relocate from the cytoplasm to the nucleus. Increased HSP27 expression with certain carcinomas has been observed. In breast cancer, HSP27 expression has been shown to be responsive to estrogen levels. In both breast cancer and melanoma, high levels of HSP27 correlate with more aggressive tumors and decreased survival. Increased levels of HSP27 in the serum of patients with Chronic Obstructive Pulmonary Disease (COPD), breast cancer and melanoma may serve as a potential diagnostic marker. No crossreactivity is observed with HSP70, 90, 104 or 110.

Applications Reported

This STRSN antibody has been reported for use in western blotting, immunohistochemical staining of formalin-fixed paraffin embedded tissue sections, ELISA, and immunocytochemistry.

Applications Tested

This STRSN antibody has been tested by western blot of reduced HeLa cell lysate, immunocytochemistry on fixed and permeabilized A549 cells, and by immunohistochemistry on formalin-fixed paraffin embedded (FFPE) human tissue with either low or high pH antigen retrieval at less than or equal to 1 µg/mL. It is recommended that the antibody be carefully titrated for optimal performance in the assay of interest.

References

Straume O, Shimamura T, Lampa MJ, Carretero J, Oyan AM, Jia D, Borgman CL, Soucheray M, Downing SR, Short SM, Kang SY, Wang S, Chen L, Collett K, Bachmann I, Wong KK, Shapiro GI, Kalland KH, Folkman J, Watnick RS, Akslen LA, Naumov GN. Suppression of heat shock protein 27 induces long-term dormancy in human breast cancer. *Proc Natl Acad Sci U S A*. 2012 109(22):8699-704.

Wood KL, Voss OH, Huang Q, Parihar A, Mehta N, Batra S, Doseff AI. The small heat shock protein 27 is a key regulator of CD8+ CD57+ lymphocyte survival. *J Immunol*. 2010 184(10):5582-8.

Srivastava P. Roles of heat-shock proteins in innate and adaptive immunity. *Nat Rev Immunol*. 2002 2(3):185-94.

Landry J, Lambert H, Zhou M, Lavoie JN, Hickey E, Weber LA, Anderson CW. Human HSP27 is phosphorylated at serines 78 and 82 by heat shock and mitogen-activated kinases that recognize the same amino acid motif as S6 kinase II. *J Biol Chem*. 1992 267(2):794-803.

Related Products

00-4953 IHC /ICC Blocking Buffer - Low Protein
00-4955 IHC Antigen Retrieval Solution – Low pH (10X)
00-4956 IHC Antigen Retrieval Solution – High pH (10X)

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00-4958 Fluoromount-G™

14-4714 Mouse IgG1 K Isotype Control Purified (P3.6.2.8.1)