



Product Information Sheet

Polyclonal Anti-Heat Shock Protein 27, *HSP27* (Magnetic Bead conjugate)

Catalogue No. PA1121-M

Lot No. 08G01

Ig type: rabbit IgG

Size: 200µg/l

Specificity

Human, rat, mouse.

No cross reactivity with other proteins.

Recommended application

Immunoprecipitation(IP)

Immunogen

A synthetic peptide corresponding to a sequence at the C-terminal of human HSP27, different from the related mouse sequence by two amino acids.

Purity

Immunogen affinity purified.

Contents

Each vial contains 1mg/ml Magnetic Bead in PBS, pH 7.2, 0.05mg NaN₃.

Storage

Store at 4°C for frequent use.

Description

This Antagene antibody is immobilized by the covalent reaction of hydrazinonicotinamide-modified antibody with formylbenzamide-modified magnetic beads. It is useful for immunoprecipitation.

BACKGROUND

The heat-shock proteins (HSPs) belong to a larger group of polypeptides, the stress proteins, that are induced in various combinations in response to environmental challenges and developmental transitions. Synthesis of the small (27-kD) HSP has been shown to be correlated with the acquisition of thermotolerance. The deduced 199-amino acid HSP27 protein shows sequence similarity to mammalian alpha-crystallins. Approximately 20% of its residues are susceptible to phosphorylation. The HSP27 gene, which is mapped to 7q11.23 and has 3 exons¹, produced a 2.2-kb transcript in an in vitro transcription assay. Decreasing ROS in cells expressing mutant huntingtin, HSP27 protects cells against oxidative stress². In other words, HSP27 is a suppressor of polyglutamine (polyQ)-mediated cell death³. Furthermore, MAPKAPK5 is a major stress-activated kinase that can phosphorylate HSP27 in vitro⁴.

REFERENCE

- 1.Hickey, E.; Brandon, S. E.; Sadis, S.; Smale, G.; Weber, L. A. : Molecular cloning of sequences encoding the human heat-shock proteins and their expression during hyperthermia. *Gene* 43: 147-154, 1986.
- 2.Wytenbach, A.; Sauvageot, O.; Carmichael, J.; Diaz-Latoud, C.; Arrigo, A.-P.; Rubinsztein, D. C. : Heat shock protein 27 prevents cellular polyglutamine toxicity and suppresses the increase of reactive oxygen species caused by huntingtin. *Hum. Molec. Genet.* 11: 1137-1151, 2002.
- 3.Wytenbach, A.; Sauvageot, O.; Carmichael, J.; Diaz-Latoud, C.; Arrigo, A.-P.; Rubinsztein, D. C. : Heat shock protein 27 prevents cellular polyglutamine toxicity and suppresses the increase of reactive oxygen species caused by huntingtin. *Hum. Molec. Genet.* 11: 1137-1151, 2002.
- 4.New, L.; Jiang, Y.; Zhao, M.; Liu, K.; Zhu, W.; Flood, L. J.; Kato, Y.; Parry, G. C. N.; Han, J. : PRAK, a novel protein kinase regulated by the p38 MAP kinase. *EMBO J.* 17: 3372-3384, 1998.

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Contact: Antagene, Inc. | Tel: 1 (866) 964-2589 | Fax: 1 (888) 225-1868 | Email: Info@antageneinc.com