



# SZABO SCANDIC

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## Produktinformation



Forschungsprodukte & Biochemikalien



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Diagnostik & molekulare Diagnostik



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### Lieferung & Zahlungsart

siehe unsere [Liefer- und Versandbedingungen](#)

### Zuschläge

- Mindermengenzuschlag
- Trockeneiszuschlag
- Gefahrgutzuschlag
- Expressversand

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# HSP27 Protein

Human Recombinant HSP27 Full Length Protein  
Catalog No. SPR-118



Discovery through partnership | Excellence through quality

## Overview

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### Product Name

HSP27 Protein

### Description

Human Recombinant HSP27 Full Length Protein

### Applications

WB, SDS-PAGE, Functional Assay, ELISA

### Concentration

1.35 mg/ml

### Conjugates

No tag

### Nature

Recombinant

### Species

Human

### Expression System

E. coli

### Amino Acid Sequence

MTERRVPFSL LRGPSWDPFR DWYPHSRLFD QAFGLPRLPE EWSQWLGSS WPGYVRPLPP AAIESPAVAA PAYSRALSRQ LSSGVSEIRH TADRWRV  
SLD VNHFAPELDT VKTKDGVVEI TGKHEERQDE HGYISRCFTR KYTLPPGVDP TQVSSLSLPE GTLTVEAPMP KLATQSNEI

### Protein Length

Full Length

## Properties

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### Storage Buffer

20mM Tris/HCl pH7.5, 0.45M NaCl, 10% glycerol, 5mM DTT

### Storage Temperature

-20°C

### Shipping Temperature

Blue Ice or 4°C

### Purification

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Affinity Purified

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### Specificity

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~27 kDa

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### Cite This Product

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Human Recombinant HSP27 Protein (StressMarq Biosciences Inc., Victoria BC CANADA, Catalog # SPR-118)

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### Certificate Of Analysis

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This product has been certified >90% pure using SDS-PAGE analysis.

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## Biological Description

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### Alternative Names

28kDa heat shock Protein, CMT2F Protein, HSP25 Protein, HSP27 Protein, HSP28 Protein, HSPB1 Protein, SRP27 Protein

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### Research Areas

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Cancer, Heat Shock

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### Cellular Localization

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Cytoplasm, Nucleus

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### Accession Number

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BC012768

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### Gene ID

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3315

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### Swiss Prot

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P04792

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### Scientific Background

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HSP27s belong to an abundant and ubiquitous family of small heat shock proteins (sHSP). It is an important HSP found in both normal human cells and cancer cells. The basic structure of most sHSPs is a homologous and highly conserved amino acid sequence, with an  $\alpha$ -crystallin-domain at the C-terminus and the WD/EPF domain at the less conserved N-terminus. This N-terminus is essential for the development of high molecular oligomers (1, 2). HSP27-oligomers consist of stable dimers formed by as many as 8-40 HSP27 protein monomers (3). The oligomerization status is connected with the chaperone activity: aggregates of large oligomers have high chaperone activity, whereas dimers have no chaperone activity (4). HSP27 is localized to the cytoplasm of unstressed cells but can redistribute to the nucleus in response to stress, where it may function to stabilize DNA and/or the nuclear membrane. Other functions include chaperone activity (as mentioned above), thermo tolerance in vivo, inhibition of apoptosis, and signal transduction. Specifically, in vitro, it acts as an ATP-independent chaperone by inhibiting protein aggregation and by stabilizing partially denatured proteins, which ensures refolding of the HSP70 complex. HSP27 is also involved in the apoptotic signaling pathway because it interferes with the activation of cytochrome c/Apaf-1/dATP complex, thereby inhibiting the activation of procaspase-9. It is also hypothesized that HSP27 may serve some role in cross-bridge formation between actin and myosin (5). And finally, HSP27 is also thought to be involved in the process of cell differentiation. The up-regulation of HSP27 correlates with the rate of phosphorylation and with an increase of large oligomers. It is possible that HSP27 may play a crucial role in termination of growth (6). Looking for more information on HSP27? Visit our new HSP27 Scientific Resource Guide at <http://www.HSP27.com>.

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### References

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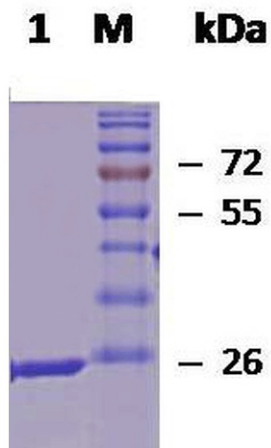
1. Kim K.K., Kim R., and Kim, S. (1998) Nature 394(6693): 595-599.
2. Van Montfort R., Slingsby C., and Vierling E. (2001) Adv Protein Chem. 59: 105-56.
3. Ehrnsperger M., Graber S., Gaestel M. and Buchner J. (1997) EMBO J. 16: 221-229.
4. Ciocca D.R., Oesterreich S., Chamness G.C., McGuire W.L., and Fugua S.A. (1993) J Natl Cancer Inst. 85 (19): 1558-70.

5. Sarto C. Binzn P.A. and Mocarelli P. (2000) Electrophoresis. 21(6): 1218-26.  
6. Arrigo A.P. (2005) J Cell Biochem. 94(2): 241-6.

## Product Images

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SDS-PAGE of 27kDa native human Hsp27 protein (SPR-118).



## Product Citations (0)

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Currently there are no citations for this product.

## Reviews

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There are no reviews yet.