



# SZABO SCANDIC

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## Produktinformation



Forschungsprodukte & Biochemikalien



Zellkultur & Verbrauchsmaterial



Diagnostik & molekulare Diagnostik



Laborgeräte & Service

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### Lieferung & Zahlungsart

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### Zuschläge

- Mindermengenzuschlag
- Trockeneiszuschlag
- Gefahrgutzuschlag
- Expressversand

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# TKD Peptide (Hsp70 Peptide)

Hsp70 Peptide  
Catalog No. SIH-118



Discovery through partnership | Excellence through quality

## Overview

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### Product Name

TKD Peptide (Hsp70 Peptide)

### Description

Hsp70 Peptide

### Purity

>98%

### Molecular Formula

TKDNLLGRFELSG

### Molecular Weight

1363

## Properties

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### Storage Temperature

-20°C

### Shipping Temperature

Shipped Ambient

### Product Type

Activator

### Solubility

In aqueous solution

### Source

Synthetic

### Appearance

Solid

### Safety Phrases

Classification: Caution: Substance not yet fully tested.

Safety Phrases:

S22 - Do not breathe dust

S24/25 - Avoid contact with skin and eyes

S36/37/39 - Wear suitable protective clothing, gloves and eye/face protection

### Cite This Product

## Biological Description

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### Research Areas

Cancer, Heat Shock

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### Scientific Background

Hsp70 genes encode abundant heat-inducible 70-kDa hsps (hsp70s). In most eukaryotes hsp70 genes exist as part of a multigene family. They are found in most cellular compartments of eukaryotes including nuclei, mitochondria, chloroplasts, the endoplasmic reticulum and the cytosol, as well as in bacteria. The genes show a high degree of conservation, having at least 50% identity (1). The N-terminal two thirds of hsp70s are more conserved than the C-terminal third. Hsp70 binds ATP with high affinity and possesses a weak ATPase activity which can be stimulated by binding to unfolded proteins and synthetic peptides (2). When hsc70 (constitutively expressed) present in mammalian cells was truncated, ATP binding activity was found to reside in an N-terminal fragment of 44 kDa which lacked peptide binding capacity. Polypeptide binding ability therefore resided within the C-terminal half (3). The structure of this ATP binding domain displays multiple features of nucleotide binding proteins (4). Heat shock protein 70 has also been found to have a high degree of plasma membrane localization in tumour cell lines. This is correlated with increased sensitivity to lysis mediated by natural killer (NK) cells. The TKD peptide is a partial hsp70 sequence (TKDNNLLGRFELSG- aa. 450-463) and has identical effects on NK cells as full-length Hsp70 protein, being able to stimulate natural killer cells activity at equivalent concentrations to full-length Hsp70 protein (5). Incubation of peripheral blood lymphocyte cells with TKD plus low-dose interleukin 2 (IL-2) enhances the cytolytic activity of NK cells against Hsp70 membrane-positive tumors, in vitro and in vivo (6). Looking for more information on HSP70? Visit our new HSP70 Scientific Resource Guide at <http://www.HSP70.com>.

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### References

1. Boorstein W. R., Ziegelhoffer T. & Craig E. A. (1993) *J. Mol. Evol.* 38(1): 1-17.
  2. Rothman J. (1989), *Cell* 59: 591 -601.
  3. DeLuca-Flaherty et al. (1990) *Cell* 62: 875-887.
  4. Bork P., Sander C. & Valencia A. (1992) *Proc. Natl Acad. Sci. USA* 89:7290-7294.
  5. Multhoff G., et al. (2001) *Cell Stress Chaperones* 6 (4): 337-344.
  6. Krause, S. W. et al. (2004) *Clin. Cancer Res.* 10(11): 3699-3707.
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## Product Images

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Currently there are no images for this product

## 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.