



# SZABO SCANDIC

Part of Europa Biosite

## Produktinformation



Forschungsprodukte & Biochemikalien



Zellkultur & Verbrauchsmaterial



Diagnostik & molekulare Diagnostik



Laborgeräte & Service

Weitere Information auf den folgenden Seiten!  
See the following pages for more information!



### Lieferung & Zahlungsart

siehe unsere [Liefer- und Versandbedingungen](#)

### Zuschläge

- Mindermengenzuschlag
- Trockeneiszuschlag
- Gefahrgutzuschlag
- Expressversand

### SZABO-SCANDIC HandelsgmbH

Quellenstraße 110, A-1100 Wien

T. +43(0)1 489 3961-0

F. +43(0)1 489 3961-7

[mail@szabo-scandic.com](mailto:mail@szabo-scandic.com)

[www.szabo-scandic.com](http://www.szabo-scandic.com)

[linkedin.com/company/szaboscandic](https://www.linkedin.com/company/szaboscandic) 

## HO-2 Protein

Rat Natural HO-2 Full Length Protein  
Catalog No. SPR-319



Discovery through partnership | Excellence through quality

### Overview

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#### Product Name

HO-2 Protein

#### Description

Rat Natural HO-2 Full Length Protein

#### Applications

WB, SDS-PAGE

#### Concentration

0.975 mg/ml

#### Conjugates

No tag

#### Nature

Natural

#### Species

Rat

#### Expression System

Native

#### Amino Acid Sequence

MSSEVETSEG VDESENNSTA PEKENHTKMA DLSSELLKEGT KEAHDRAENT QFVKDFLKGK IKKELFKLAT TALYFTYSAL EEEMDRNKDH PAFAPLY  
FPT ELHRKEALIK DMEYFFGENW EEQVKCSEAA QKYVDRIHYV GQNEPELLVA HAYTRYMGDL SGGQVLKKVA QRALKLPST

#### Protein Length

Full Length

### Properties

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#### Storage Buffer

20mM Tris pH7.5, 0.1mM EDTA, 0.25% Na cholate, <20mM KCl

#### Storage Temperature

-80°C

#### Shipping Temperature

Blue Ice or 4°C

#### Purification

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Ion-exchange Purified

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### Specificity

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~36 kDa

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### Cite This Product

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Rat Natural HO-2 Protein (StressMarq Biosciences Inc., Victoria BC CANADA, Catalog # SPR-319)

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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

Heme oxygenase 2 Protein, Heme oxygenase (decycling) 2 Protein, Heme oxygenase (decyclizing) 2 Protein, HMOX 2 Protein, HMOX2 Protein, HMOX2\_HUMAN Protein, HO 2 Protein, HO2 Protein

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### Research Areas

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Cancer, Oxidative Stress

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### Cellular Localization

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Endoplasmic Reticulum, Microsome

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### Accession Number

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NP\_077363.1

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### Gene ID

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79239

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### Swiss Prot

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P23711

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### Scientific Background

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Heme-oxygenase is a ubiquitous enzyme that catalyzes the initial and rate-limiting steps in heme catabolism yielding equimolar amounts of biliverdin, iron and carbon monoxide. Biliverdin is subsequently converted to bilirubin and the free iron is sequestered to ferritin (1). These products have important physiological effects as carbon monoxide is a potent vasodilator; biliverdin and bilirubin are potent antioxidants; and the free iron increases oxidative stress and regulates the expression of many mRNAs (2). There are three isoforms of heme-oxygenase, HO-1, HO-2 and HO-3; however HO-1 and HO-2 are the major isoforms as they both have been identified in mammals (3). HO-1, also known as heat shock protein 32, is an inducible isoform activated by most oxidative stress inducers, cytokines, inflammatory agents and heat shock. HO-2 is a constitutive isoform which is expressed under homeostatic conditions. HO-1 is also considered to be a cytoprotective factor in that free heme is highly reactive and cytotoxic, and secondly, carbon monoxide is a mediator inhibiting the inflammatory process and bilirubin is a scavenger for reactive oxygen, both of which are the end products of heme catalyzation (4). It has also been shown that HO-1 deficiency may cause reduced stress defense, a pro-inflammatory tendency (5), susceptibility to atherosclerotic lesion formation (6), endothelial cell injury, and growth retardation (7). Up-regulation of HO-1 is therefore said to be one of the major defense mechanisms of oxidative stress (4).

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### References

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1. Froh M. et al. (2007) World J. Gastroenterol 13(25): 3478-86.
2. Elbirt K.K. and Bonkovsky H.L. (1999) Proc Assoc Am Physicians 111(5): 348-47.
3. Maines M.D., Trakshel G.M., and Kutty R.K. (1986) J Biol Chem 261: 411-419.
4. Brydun A., et al. (2007) Hypertens Res 30(4): 341-8.
5. Poss K.D. and Tonegawa S. (1997). Proc Natl Acad Sci U S A. 94: 10925-10930.

6. Yet S.F., et al. (2003) FASEB J. 17: 1759–1761.
  7. Yachie A., et al. (1999) J Clin Invest. 103: 129–135.
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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.