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Zuschläge

- Mindermengenzuschlag
- Trockeneiszuschlag
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- Expressversand

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HO-1 Protein

Rat Natural HO-1 Full Length Protein
Catalog No. SPR-318



Discovery through partnership | Excellence through quality

Overview

Product Name

HO-1 Protein

Description

Rat Natural HO-1 Full Length Protein

Applications

WB, SDS-PAGE

Concentration

0.30 mg/ml

Conjugates

No tag

Nature

Natural

Species

Rat

Expression System

Native

Protein Length

Full Length

Properties

Storage Buffer

20mM Tris pH7.5, 0.1mM EDTA, 0.1% triton x-100, 0.2% Na cholate, <50mM KCl

Storage Temperature

-80°C

Shipping Temperature

Blue Ice or 4°C

Purification

Ion-exchange Purified

Specificity

~33 kDa

Cite This Product

Rat Natural HO-1 Protein (StressMarq Biosciences Inc., Victoria BC CANADA, Catalog # SPR-318)

Certificate Of Analysis

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

Biological Description

Alternative Names

Heme oxygenase 1 Protein, HSP32 Protein, Hemox Protein, 32 kD Protein, bK286B10 Protein, D8Wsu38e Protein, heat shock protein 32kD Protein, Heat shock Protein, Heme oxygenase (decycling) 1 Protein, HMOX 1 Protein, Hmox Protein, HMOX1 Protein, HO 1 Protein, HO Protein, HO1 Protein

Research Areas

Cancer, Oxidative Stress

Cellular Localization

Endoplasmic Reticulum, Microsome

Accession Number

NP_689605.1

Gene ID

24451

Swiss Prot

P06762

Scientific Background

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).

References

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

Currently there are no images for this product

Product Citations (0)

Currently there are no citations for this product.

Reviews

There are no reviews yet.