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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

www.szabo-scandic.com

linkedin.com/company/szaboscandic

HSP90 Protein

P. Falciparum Recombinant HSP90 Partial Protein
Catalog No. SPR-122

StressMarq Biosciences INC.
Discovery through partnership | Excellence through quality

Overview

Product Name

HSP90 Protein

Description

P. Falciparum Recombinant HSP90 Partial Protein

Applications

WB, SDS-PAGE

Concentration

1.3 mg/ml

Conjugates

No tag

Nature

Recombinant

Species

P. Falciparum

Expression System

E. coli

Amino Acid Sequence

QPVLEINPNHFIIKQLNHLIQIDKMNLQNSEIAEQIFDVASMQGGYTIDDTGLFAKRVIGMMEKNAEQYLMNVQSNISNNTLNNNTSGSEMPQNNSPNE
LQSEMKSTNGIDDNSNISENKINESSSNQNNIGENSIAEENNIKNIAESDVNKINLGENDVSQNTMHKQDSGLFNLDPSILNSNMLSGSDKTLL

Protein Length

Partial

Properties

Storage Buffer

50mM Tris/HCl pH7.5, 300mM NaCl, 10% glycerol

Storage Temperature

-20ºC

Shipping Temperature

Blue Ice or 4ºC

Purification

Affinity Purified

Specificity

~234 kDa

Cite This Product

Plasmodium falciparum Recombinant HSP90 Protein (StressMarq Biosciences Inc., Victoria BC CANADA, Catalog # SPR-122)

Certificate Of Analysis

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

Biological Description

Alternative Names

PfHSP90 Protein, Pf14_-417 HSP90 Protein, HSP90 Protein

Research Areas

Cancer, Heat Shock

Cellular Localization

Cytoplasm, Melanosome

Accession Number

XP_001348591.1

Gene ID

811999

Swiss Prot

Q8IL32

Scientific Background

HSP90 is an abundantly and ubiquitously expressed heat shock protein. It is understood to exist in two principal forms alpha and beta, which share 85% sequence amino acid homology. The two isoforms of HSP90 are expressed in the cytosolic compartment (1). Despite the similarities, HSP90alpha exists predominantly as a homodimer while HSP90beta exists mainly as a monomer (2). From a functional perspective, HSP90 participates in the folding, assembly, maturation, and stabilization of specific proteins as an integral component of a chaperone complex (3-6). Furthermore, HSP90 is highly conserved between species; having 60% and 78% amino acid similarity between mammalian and the corresponding yeast and Drosophila proteins, respectively. HSP90 is a highly conserved and essential stress protein that is expressed in all eukaryotic cells. Despite its label of being a heat-shock protein, HSP90 is one of the most highly expressed proteins in unstressed cells (1-2% of cytosolic protein). It carries out a number of housekeeping functions, including controlling the activity, turnover, and trafficking of a variety of proteins. Most of the HSP90-regulated proteins that have been discovered to date are involved in cell signaling (7-8). The number of proteins now know to interact with HSP90 is about 100. Target proteins include the kinases v-Src, Wee1, and c-Raf, transcriptional regulators such as p53 and steroid receptors, and the polymerases of the hepatitis B virus and telomerase (5). When bound to ATP, HSP90 interacts with co-chaperones Cdc37, p23, and an assortment of immunophilin-like proteins, forming a complex that stabilizes and protects target proteins from proteasomal degradation. In most cases, HSP90-interacting proteins have been shown to co-precipitate with HSP90 when carrying out immune adsorption studies, and to exist in cytosolic heterocomplexes with it. In a number of cases, variations in HSP90 expression or HSP90 mutation has been shown to degrade signaling function via the protein or to impair a specific function of the protein (such as steroid binding, kinase activity) in vivo. Ansamycin antibiotics, such as geldanamycin and radicicol, inhibit HSP90 function (9). Recently, Prof. Tatu's laboratory has shown the importance of HSP90 in parasite growth. They have shown that inhibition of P. Falciparum HSP90 (PfHSP90), blocks the erythrocytic cycle by inhibiting stage transformation, leading to inhibition of parasite growth (10, 11). Looking for more information on HSP90? Visit our new HSP90 Scientific Resource Guide at http://www.HSP90.ca.

References

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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.