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

www.szabo-scandic.com

linkedin.com/company/szaboscandic

StressXpress®

HSP70 ELISA Kit (High-Sensitivity)

High-Sensitivity Colorimetric detection of HSP70
Catalog No. SKT-108

StressMarq Biosciences INC.
Discovery through partnership | Excellence through quality

Overview

Product Name

HSP70 ELISA Kit (High-Sensitivity)

Description

High-Sensitivity Colorimetric detection of HSP70

Species Reactivity

Dog, Human, Monkey, Mouse, Rat

Platform

Microplate

Sample Types

Cell lysates, Plasma, Serum, Tissue

Detection Method

Colorimetric Assay

Assay Type

Sandwich ELISA (Enzyme-linked Immunosorbent Assay)

Utility

ELISA kit used to quantitate HSP70 concentration in samples.

Sensitivity

0.02 ng/ml

Assay Range

0.55 - 35 ng/ml

Incubation Time

30 minutes

Number Of Samples

40 samples in duplicate

Other Resources

Kit Booklet, MSDS

Properties

Storage Temperature

4ºC

Shipping Temperature

Blue Ice

Product Type

ELISA Kits

Assay Overview

1. Prepare Standard and samples in Standard and Sample Diluent.
2. Add 100 µL of Standard or sample to appropriate wells.
3. Cover plate with Plate Sealer and incubate at 37°C for 2 hours.
4. Wash plate four times with 1X Wash Buffer.
5. Add 100 µL of Biotinylated Antibody Working Solution to each well.
6. Cover plate with Plate Sealer and incubate at at 37°C for 2 hours.
7. Wash plate four times with 1X Wash Buffer.
8. Add 100 µL of Streptavidin-HRP Working Solution to each well.
9. Cover plate with Plate Sealer and incubate at 37°C for 30 minutes.
10. Wash plate four times with 1X Wash Buffer.
11. Add 100 µL of TMB Substrate to each well.
12. Develop the plate in the dark at room temperature for 30 minutes.
13. Stop reaction by adding 100 µL of Stop Solution to each well.
14. Measure absorbance on a plate reader at 450 nm.

Kit Components

Component No.	**Item**	**Quantity / Size**
SKC-108A	Anti-Hsp70 Immunoassay Plate	1 Plate
SKC-108B	Recombinant Hsp70 Standard	2 vials
SKC-108C	Standard and Sample Diluent	1 vial/ 50 ml
SKC-108D	10X Wash Buffer Concentrate	1 vial/100 ml
SKC-108E	Anti-Hsp70 Biotinylated Antibody Concentrate	1 vial/150 µl
SKC-108F	Anti-Hsp70 Biotinylated Antibody Diluent	

1 vial/ 13 ml

SKC-108G

Streptavidin: HRP Concentrate

1 vial/150 µl

SKC-108H

Streptavidin: HRP Diluent

1 vial/ 13 ml

SKC-108I

TMB Substrate

1 vial/ 13 ml

SKC-108J

Stop Solution

1 vial/ 13 ml

Cite This Product

HSP70 ELISA Kit (High-Sensitivity) (StressMarq Biosciences Inc., Victoria BC CANADA, Catalog # SKT-108)

Biological Description

Alternative Names

HSP70 1 ELISA Kit, HSP70 2 ELISA Kit, HSP70.1 ELISA Kit, HSP72 ELISA Kit, HSPA1 ELISA Kit, HSPA1A ELISA Kit, HSPA1B ELISA Kit

Research Areas

Cancer, Heat Shock

Scientific Background

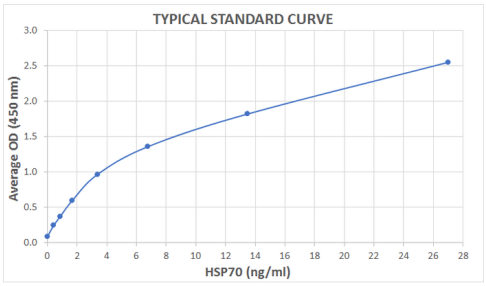
HSP70 genes encode abundant heat-inducible 70-kDa HSPs (HSP70s). In most eukaryotes HSP70 genes exist as part of a multigene family. They are found in most cellular compartments of eukaryotes including nuclei, mitochondria, chloroplasts, the endoplasmic reticulum and the cytosol, as well as in bacteria. The genes show a high degree of conservation, having at least 5O% identity (2). 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 (3). When HSC70 (constitutively expressed) present in mammalian cells was truncated, ATP binding activity was found to reside in an N-terminal fragment of 44kDa which lacked peptide binding capacity. Polypeptide binding ability therefore resided within the C-terminal half (4). The structure of this ATP binding domain displays multiple features of nucleotide binding proteins (5). All HSP70s, regardless of location, bind proteins, particularly unfolded ones. The molecular chaperones of the HSP70 family recognize and bind to nascent polypeptide chains as well as partially folded intermediates of proteins preventing their aggregation and misfolding. The binding of ATP triggers a critical conformational change leading to the release of the bound substrate protein (6). The universal ability of HSP70s to undergo cycles of binding to and release from hydrophobic stretches of partially unfolded proteins determines their role in a great variety of vital intracellular functions such as protein synthesis, protein folding and oligomerization and protein transport. Looking for more information on HSP70? Visit our new HSP70 Scientific Resource Guide at http://www.HSP70.com.

References

1. Zho J. (1998) Cell. 94: 471-480.
2. Boorstein W. R., Ziegelhoffer T. & Craig E. A. (1993) J. Mol. Evol. 38 (1) 1-17.
3. Rothman J. (1989) Cell 59: 591 -601.
4. DeLuca-Flaherty et al. (1990) Cell. 62: 875-887.

5. Bork P., Sander C. & Valencia A. (1992) Proc. Natl Acad. Sci. USA. 89: 7290-7294.
6. Fink A.L. (1999) Physiol. Rev. 79: 425-449.
7. Smith D.F., et al. (1993) Mol. Cell. Biol. 13(2): 869-876.
8. Prapapanich V., et al. (1996) Mol. Cell. Biol. 16(11): 6200-6207.
9. Fernandez-Funez et al. (2000) Nature. 408(6808): 101-106.

Product Images



Typical Standard Curve for the HSP70 ELISA Kit (High-Sensitivity) (Enzyme-Linked Immunosorbent Assay) StressXpress® – SKT-108. Assay Type: Sandwich ELISA. Detection Method: Colorimetric Assay. Assay Range: 0.55 – 35 ng/mL.

Product Citations (4)

Other Citations

Effects of heated hydrotherapy on muscle HSP70 and glucose metabolism in old and young vervet monkeys.

Kavanagh, K., Davis, A.T., Jenkins, K.A. and Flynn, D.M. (2016) Cell Stress Chaperones. [Epub ahead of print]

PubMed ID: 27188431 **Reactivity:** Monkey

Elevation of serum heat-shock protein levels in amyotrophic lateral sclerosis.

Miyazaki, D. et al. (2016) Neurol Sci. [Epub ahead of print]

PubMed ID: 27112486 **Reactivity:** Human

The Brewed Rice Vinegar Kurozu Increases HSPA1A Expression and Ameliorates Cognitive Dysfunction in Aged P8 Mice.

Kanouchi, H. et al. (2016) PLoS ONE. 11(3):e0150796.

PubMed ID: 26943920 **Reactivity:** Mouse

Muscle Heat Shock Protein 70 Predicts Insulin Resistance With Aging.

Chichester, L., Wylie, A.T., Craft, S., and Kavanagh, K. (2014) J Gerontol A Biol Sci Med Sci. 70(2):155-62.

PubMed ID: 24532784 **Reactivity:** African green monkey

Reviews

Based on validation through cited publications.

★★★★★

StressMarq Biosciences
June 15, 2016: