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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

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StressXpress®

HSP70 ELISA Kit

Colorimetric detection of HSP70
Catalog No. SKT-105

StressMarq Biosciences INC.
Discovery through partnership | Excellence through quality

Overview

Product Name

HSP70 ELISA Kit

Description

Colorimetric detection of HSP70

Species Reactivity

Human

Platform

Microplate

Sample Types

Cell lysates, Tissue

Detection Method

Colorimetric Assay

Assay Type

Sandwich ELISA (Enzyme-linked Immunosorbent Assay)

Utility

ELISA kit used to quantitate HSP70 concentration in samples.

Sensitivity

0.18 ng/ml

Assay Range

0.781 - 50 ng/mL

Incubation Time

30 minutes

Number Of Samples

40 samples in duplicate

Other Resources

Kit Booklet, MSDS

Properties

Storage Temperature

4°C

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 to appropriate wells.
3. Add 50 µL of Pre-Treatment Buffer to all sample wells.
4. Add 50 µL of sample to appropriate wells.
5. Cover plate with Plate Sealer and incubate at 37°C for 2 hours.
6. Wash plate four times with 1X Wash Buffer.
7. Add 100 µL of Detection Antibody Working Solution to each well.
8. Cover plate with Plate Sealer and incubate at 37°C for 2 hours.
9. Wash plate four times with 1X Wash Buffer as described in step 6.
10. Add 100 µL of Streptavidin-HRP Working Solution to each well.
11. Cover plate with Plate Sealer and incubate at room temperature for 30 minutes.
12. Wash plate four times with 1X Wash Buffer as described in step 6.
13. Add 100 µL of TMB Substrate to each well.
14. Develop the plate in the dark at room temperature for 30 minutes.
15. Stop reaction by adding 100 µL of Stop Solution to each well.
16. Measure absorbance on a plate reader at 450 nm.

Kit Components

Component No.	**Item**	**Quantity / Size**
SKC-105A	Anti-Hsp70 Immunoassay Plate	1 Plate
SKC-105B	5X Hsp70 Extraction Reagent	1 vial/10 ml
SKC-105C	Recombinant Hsp70 Standard	2 vials
SKC-105D	Standard and Sample Diluent	1 vial/ 50 ml
SKC-105E	10X Wash Buffer Concentrate	1 vial/100 ml
SKC-105F		

Anti-Hsp70 Biotinylated Antibody Concentrate
1 vial/150 µl
SKC-105G
Anti-Hsp70 Biotinylated Antibody Diluent
1 vial/ 13 ml
SKC-105H
Streptavidin: HRP Concentrate
1 vial/150 µl
SKC-105I
Streptavidin: HRP Diluent
1 vial/ 13 ml
SKC-105J
TMB Substrate
1 vial/ 13 ml
SKC-105K
Stop Solution
1 vial/ 13 ml
SKC-105L
Pre-treatment Buffer
1 vial/ 13 ml

Cite This Product
HSP70 ELISA Kit (StressMarq Biosciences Inc., Victoria BC CANADA, Catalog # SKT-105)

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

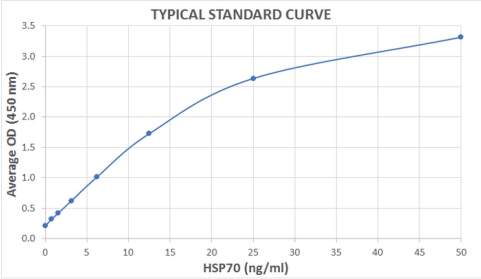
nascent polypeptide chains as well as partially folded intermediates of proteins preventing their aggregation and misfolding. The binding of ATP triggers a critical conformational change leading to the release of the bound substrate protein (6). The universal ability of HSP70s to undergo cycles of binding 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: 71-480.
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 (Enzyme-Linked Immunosorbent Assay) StressXpress® – SKT-105. Assay Type: Sandwich ELISA. Detection Method: Colorimetric Assay. Assay Range: 0.781 – 50 ng/mL.



Product Citations (2)

Other Citations

Differential expression pattern of heat shock protein 70 gene in tissues and heat stress phenotypes in goats during peak heat stress period.

Rout, P.K., Kaushik, R. and Ramachandran, N. (2016) Cell Stress Chaperones. [Epub ahead of print]

PubMed ID: 27169748 **Reactivity:** Goat

Enterococcus faecium NCIMB 10415 Modulates Epithelial Integrity, Heat Shock Protein, and Proinflammatory Cytokine Response in Intestinal Cells.

Klingspor, S. et al. (2014) Mediators Inflamm. 2015:304149.

PubMed ID: 25948884 **Reactivity:** Human

Reviews

Based on validation through cited publications.

★★★★★

StressMarq Biosciences

June 15, 2016: