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Zuschläge

- Mindermengenzuschlag
- Trockeneiszuschlag
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StressXpress®
HSC70 ELISA Kit

Colorimetric detection of HSC70
Catalog No. SKT-106



Discovery through partnership | Excellence through quality

Overview

Product Name

HSC70 ELISA kit

Description

Colorimetric detection of HSC70

Species Reactivity

Human

Platform

Microplate

Sample Types

Cell lysates, Serum, Tissue

Detection Method

Colorimetric Assay

Assay Type

Sandwich ELISA (Enzyme-linked Immunosorbent Assay)

Utility

ELISA kit used to quantitate HSC70 concentration in samples.

Sensitivity

1.54 ng/ml

Assay Range

2.34 - 150 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 or sample to appropriate wells.
 3. Cover plate with Plate Sealer and incubate at room temperature (20-25°C) for 1 hour.
 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 room temperature for 1 hour.
 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 room temperature 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.
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Kit Components

Component No.**Item****Quantity / Size**

SKC-106A

Anti-Hsc70 Immunoassay Plate

1 Plate

SKC-106B

5X Hsc70 Extraction Reagent

1 vial/10 ml

SKC-106C

Recombinant Hsc70 Standard

2 vials

SKC-106D

Standard and Sample Diluent

1 vial/ 50 ml

SKC-106E

10X Wash Buffer Concentrate

1 vial/100 ml

SKC-106F

Anti-Hsc70 Biotinylated Antibody Concentrate

1 vial/150 µl

SKC-106G

Anti-Hsc70 Biotinylated Antibody Diluent

1 vial/ 13 ml

SKC-106H

Streptavidin: HRP Concentrate

1 vial/150 µl

SKC-106I

Streptavidin: HRP Diluent

1 vial/ 13 ml

SKC-106J

TMB Substrate

1 vial/ 13 ml

SKC-106K

Stop Solution

1 vial/ 13 ml

Cite This Product

HSC70 ELISA kit (StressMarq Biosciences Inc., Victoria BC CANADA, Catalog # SKT-106)

Biological Description

Alternative Names

HSC54 ELISA Kit, HSC71 ELISA Kit, HSC73 ELISA Kit, HSP71 ELISA Kit, HSP73 ELISA Kit, HSPA10 ELISA Kit, HSPA8 ELISA Kit, LAP1 ELISA Kit, NIP71 ELISA Kit

Research Areas

Cancer, Heat Shock

Scientific Background

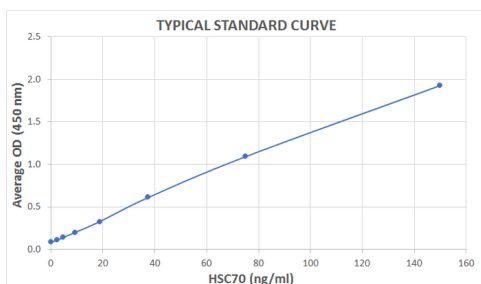
HSP70 genes encode abundant heat-inducible 70-kDa HSPs (HSP70s). In most eukaryotes HSP70 genes exist as part of a multigene family. They are found in most cellular compartments of eukaryotes including nuclei, mitochondria, chloroplasts, the endoplasmic reticulum and the cytosol, as well as in bacteria. The genes show a high degree of conservation, having at least 50% 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 44 kDa 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). When cells are subjected to metabolic stress (e.g., heat shock) a member of the HSP 70 family, HSP 70 (HSP72), is expressed; HSP 70 is highly related to HSC70 (>90% sequence identity). Constitutively expressed HSC70 rapidly forms a stable complex with the highly inducible HSP70 in cells following heat shock. The interaction of HSC70 with HSP 70 is regulated by ATP. These two heat shock proteins move together in the cell experiencing stress. Furthermore, research on HSC70 has implicates it with a role in facilitating the recovery of centrosomal structure and function after heat shock (6).

References

1. Brown C.L., et al. (1993) J. Cell Biol., 120 (5):1101-1112.
2. Boorstein W.R., Ziegelhoffer T., and 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., and Valencia A. (1992) Proc. Natl Acad. Sci. USA 89: 7290-7294.
6. Brown C.L., et al. (1996) J. Biol. Chem. 271(2): 833-840.

Product Images

Typical Standard Curve for the HSC70 ELISA kit (Enzyme-Linked Immunosorbent Assay) StressXpress® - SKT-106. Assay Type: Sandwich ELISA. Detection Method: Colorimetric Assay. Assay Range: 2.34 - 150 ng/mL.



Product Citations (1)

Other Citations

Changes in the Heat Shock 70 kDa Protein Level in Human Neutrophils Induced by Heat Shock.

Boyko, A. A., Vetchinin, S. S., Sapozhnikov, A. M. and Kovalenko, E. I. -2014 Bioorg Khim. 40 (5): 488-498.

PubMed ID: 25895348 **Reactivity:** Human

Reviews

Based on validation through cited publications.



StressMarq Biosciences

June 15, 2016: