

StressXpress®
HSP70 ELISA Kit
(High-Sensitivity)

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Discovery through Partnership | Excellence through Quality

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

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

0.038 ng/ml

Assay Range

0.42 - 27 ng/ml

Incubation Time

30 minutes

Number Of Samples

40 samples in duplicate

Other Resources

Kit Booklet Lot No. VH853927 , Kit Booklet Lot No. VH477277 , Kit Booklet Lot No. VH777390 , Kit Booklet Lot No. VH288828 , MSDS

Field Of Use

Not for use in humans. Not for use in diagnostics or therapeutics. For in vitro research use only.

Properties

Storage Temperature

4°C and -20°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 37°C for 1 hour with shaking at 600rpm. 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 1 hour with shaking at 600rpm. 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 with shaking at 600rpm. 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 Overview

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/50 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, HSP70 2, HSP70.1, HSP72, HSPA1, HSPA1A, HSPA1B

Research Areas

Cancer, Cell Signaling, Chaperone Proteins, Heat Shock, Protein Trafficking, Tumor Biomarkers

Scientific Background

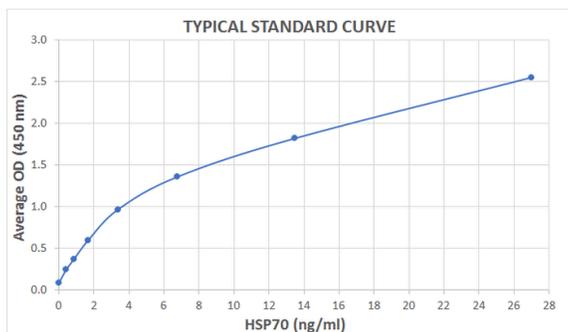
Heat Shock Protein 70 (HSP70) is a highly conserved molecular chaperone encoded by a multigene family and expressed across all major cellular compartments, including the cytosol, mitochondria, and endoplasmic reticulum. HSP70 binds to nascent and misfolded proteins, preventing aggregation and facilitating proper folding through ATP-dependent conformational changes.

In neuroscience, HSP70 plays a critical role in maintaining proteostasis under stress conditions. Its ability to stabilize unfolded proteins is especially relevant in neurodegenerative diseases such as Alzheimer's, Parkinson's, and ALS, where protein misfolding and aggregation are central to pathogenesis. HSP70's dynamic binding and release cycles are essential for neuronal survival, synaptic function, and cellular resilience. By modulating HSP70 activity, researchers aim to enhance the brain's natural defense mechanisms against proteotoxic stress, making it a promising therapeutic target in neurodegeneration.

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.
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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.

Reviews

Based on validation through cited publications.



StressMarq Biosciences
June 15, 2016:

Product Citations

FOR REFERENCE USE ONLY

93/100 Bioz Rating 16 Citations 9 Images

Bioz AI Summary: The HSP70 ELISA Kit from StressMarq has been extensively ut

Search term

Techniques ▾

- Search for Techniques
- Enzyme-linked Immunosorbent Assay (ELISA)
- Concentration Assay (CO-A)
- Expressing (EXP)
- Amplification (AMP)

Journals ▾

- Search for Journals
- AJOG Global Reports
- American journal of veterinary research
- Amyotrophic lateral sclerosis & frontotemporal degeneration
- BMC Research Notes
- Cell Stress & Chaperones
- International Journal of Molecular Sciences

Dates ▾

Speed positively relates to initial core temperature elevations in exercising halibut biology with myoglobin as a macromolecules

Karolyne Gallum Donnelly, ..., Christopher W Frye

American journal of veterinary research | 2025 Oct 27 | 41145074 | [Read Article](#) | [Bioz AI Brief](#)

"Canine myoglobin was measured according to the manufacturer's instructions using ELISA (Kamiya Biomedical instructions, HSPs were measured with ELISA (HSP70 StressExpress ELISA kit; StressMarq Bioscience) with a

ELISA

AST

DIA

- AST Assay (AST)

- Journal of veterinary internal medicine
- Mediators of Inflammation
- Neurological sciences : official journal of the Italian Neurological Society and of the Italian Society of Clinical Neurophysiology
- PLoS ONE

Role of lncRNAs H19, KCNQ10T1 and SRA in relation to peroxisome proliferator-activated receptor gamma

Rana K Zayed, Noha H Sayed, ..., Amira Shaheen

International journal of biological macrom... | 2025 Oct 12 | 41086894 | [Read Article](#) | [Bioz AI Brief](#)

"Bioz AI Summary: The HSP70 ELISA Kit from StressMarq played a pivotal role in the study by enabling the p

(BCA-P)

[qPCR](#)

[SYBR-G](#)

[PCR](#)

[qRT-PCR](#)

- Control (CON)

- Scientific Reports

- The Journals of Gerontology Series A: Biological Sciences and Medical Sciences

- Diagnostic Assay (DIA)

- Veterinary anaesthesia and analgesia

Prospective Determination of Heat Shock Protein Serum Levels in Saskatchewan Women during Pregnancy

AJOG Global Reports | 2025 Jun 01 | [Read Article](#) | [Bioz AI Brief](#)

"were assessed with commercial ELISA kits from Enzo Life Sciences (Cat # ADI-EKS-500; Plymouth Meeting, P

Biosciences (#SKT-108 kits utilized seven standard concentrations according to the manufacturer's recommended

Incubation (INCU)

[ELISA](#)

- Inter Assay (INTER-A)

- Irradiation (IRRAD)

A pilot study on the relationship between thermal habits, chronic inflammation, and arterial stiffness in you

Masayo Nagai, Akiko Tanaka

BMC Research Notes | 2025 Apr 14 | [Read Article](#) | [Bioz AI Brief](#)

Article Snippet

- Mann-Whitney U-Test (MWU)

".. and analyzed immediately. Before measurement, samples were thawed and analyzed immediately.. Plasma le hsCRP, and IL-6 were quantified using enzyme-linked immunosorbent assay (ELISA) with the following kits, ; manufacturers' protocols: **HSP70: HSP70 ELISA Kit (StressMarq Biosciences INC)**, hsCRP: hsCRP ELISA Instruments GmbH), IL-6: Human IL-6 Immunoassay (Quantikine).. All plasma samples were measured in dup mean.." [More...](#)

Table Legend

"Association between hot tub bathing habits and chronic inflammation-related proteins and arterial stiffness ...

[ELISA](#)

- Polymerase Chain Reaction (PCR)

A pilot study on the relationship between thermal habits, chronic inflammation, and arterial stiffness in you

Masayo Nagai, Akiko Tanaka

BMC Research Notes | 2025 Apr 14 | [Read Article](#) | [Bioz AI Brief](#)

- Quantitative RT-PCR (qRT-PCR)

".. and analyzed immediately. Before measurement, samples were thawed and analyzed immediately.. Plasma le hsCRP, and IL-6 were quantified using enzyme-linked immunosorbent assay (ELISA) with the following kits, ; manufacturers' protocols: **HSP70: HSP70 ELISA Kit (StressMarq Biosciences INC)**, hsCRP: hsCRP ELISA Instruments GmbH), IL-6: Human IL-6 Immunoassay (Quantikine).. All plasma samples were measured in dup mean.." [More...](#)

- Recombinant (RECMB)

Table Legend

"Significant bivariate relationships between chronic inflammation-related proteins, arteriosclerosis, and bathing

[More...](#)

- Reverse Transcription Polymerase Chain Reaction

ELISA (PCR)

- SYBR Green Assay (SYBR-G)

- Sandwich ELISA (ELISA-S)

Cited 2 times

Serum heat shock protein concentrations are not associated with amyotrophic lateral sclerosis risk or survival

James P. Rooney, Grainne Geoghegan, ..., Stefan Rakete

Amyotrophic lateral sclerosis & frontotemp... | 2024 Jun 03 | 38826044 | [Read Article](#)

".. assays (ELISA) kits. Serum HSPs were measured using commercially available enzyme-linked immunosorbent (Victoria, Canada), while DNAJC7 was measured using kit MBS9340859-96 from MyBioSource following the n

- Western Blot

SP (WB)

ELISA

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