

AMP'D[®] HSP70 high sensitivity ELISA kit

Ultra-sensitive (7 pg/ml) AMP'D[®] HSP70 high sensitivity ELISA kit enabling the ability to use less sample and detect both baseline and upregulated levels of human, mouse and

rat Hsp70 (Hsp72), a major chaperone, cancer biomarker, and key cell stress

Regulator. The Hsp70 family of heat shock proteins contains multiple homologs ranging in size from 66-78 kDa, and are the eukaryotic equivalents of the bacterial DnaK. The most studied Hsp70 members include the cytosolic stress-induced Hsp70 (Hsp72), the constitutive cytosolic Hsc70 (Hsp73), and the ER-localized BiP (Grp78). Hsp70 family members contain highly conserved N-terminal ATP-ase and C-terminal protein binding domains. Binding of peptide to Hsp70 is assisted by Hsp40, and stimulates the inherent ATPase activity of Hsp70, facilitating ATP hydrolysis and enhanced peptide binding. Hsp70 nucleotide exchange and substrate binding coordinates the folding of newly synthesized proteins, the re-folding of misfolded or denatured proteins, coordinates trafficking of proteins across cellular membranes, inhibits protein aggregation, and targets the degradation of proteins via the proteasomal pathway.

Citations: 9

[View Online »](#)

Ordering Information

[Order Online »](#)

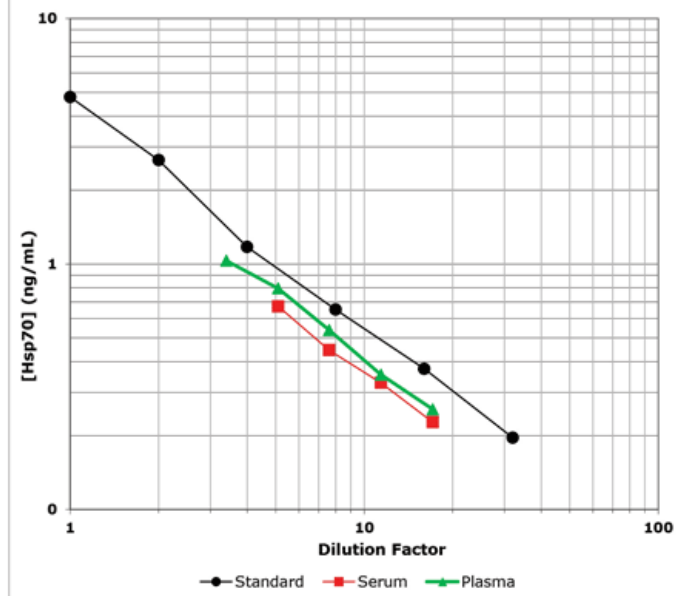
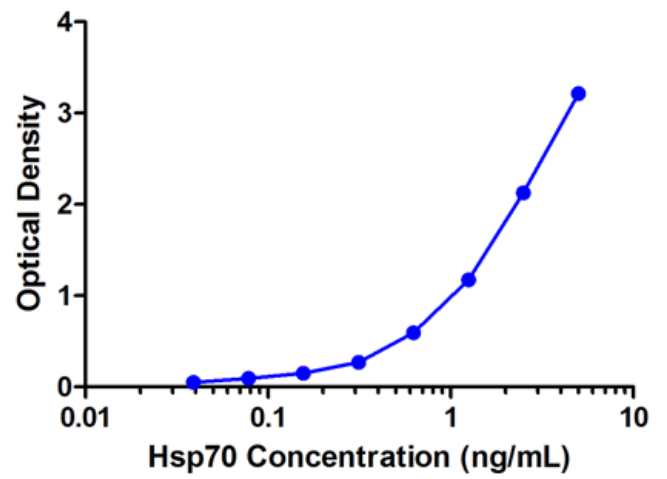
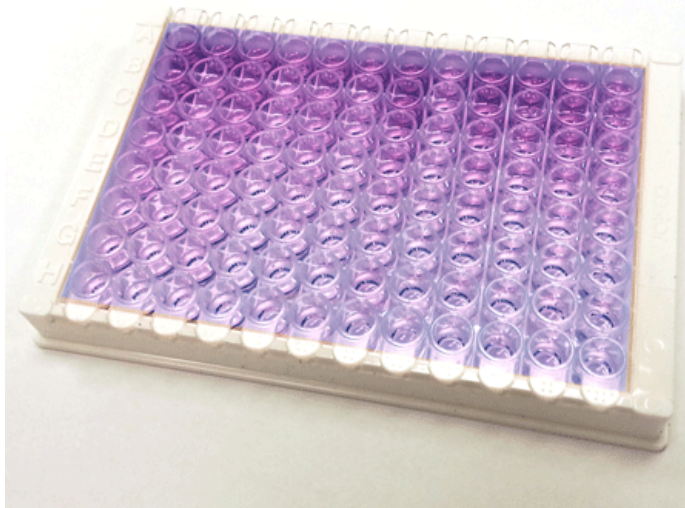
ENZ-KIT-101-0001

96 wells

Manuals, SDS & CofA

[View Online »](#)

- Ultra-sensitive measurement of Hsp70, detecting as little as 7 pg/ml
- Ability to detect both baseline and upregulated/stressed levels of Hsp70 in human, mouse and rat serum and plasma samples
- Negligible reactivity from similar Hsp70 family members (Hsc70/Hsp73, Grp78, DnaK, or Hsp71)
- High throughput format with results in 4.5 hours for up to 38 samples in duplicate
- Fully quantitative results that surpass semi-quantitative Western blot analysis



Handling & Storage

Use/Stability Store all components at 4°C, except standard at -20°C.

Shipping Dry Ice

Regulatory Status RUO - Research Use Only

Product Details

Alternative Name Heat shock protein 70, HSP72

Application Colorimetric detection, ELISA

Application Notes For the quantitative determination of normal and upregulated (stressed) levels of HSP70 in serum and plasma of human, mouse, and rat origin.

Assay Time 4.5 hours

Compatibility This product is compatible with the [Absorbance 96 Plate Reader](#).

Contents Microtiter Plate, Assay Buffer 28, Standard, Wash Buffer Concentrate, Antibody, Conjugate, and AMP'D[®] (Signal Amplification) Substrate, Amplifier, Substrate Diluent, Amplifier Diluent, and Stop Solution

Crossreactivity HSP72 (human) (100%), HSP70 (rat) (117.6%), HSP70B' (human) (5.4%), HSP70 (salmon) (0.8%), DnaK (E.coli) (0.5%), and <0.016%: Hsc70 (bovine), Grp78 (hamster), HSP71 (M. tuberculosis)

GenBank ID M11717

Gene/Protein Identifier NP_005336.3 (RefSeq), NM_005345 (RefSeq), 3303 (Entrez GeneID), 140550 (OMIM)

Sensitivity 7 pg/ml (range 0.039 – 5 ng/ml)

Species Reactivity Human, Mouse, Rat

UniProt ID P0DMV8 (HSPA1A), P0DMV9 (HSPA1B)

Wavelength

495 nm

Last modified: May 29, 2024



ENZO LIFE SCIENCES,
INC.
Phone: 800.942.0430
[info-
usa@enzolifesciences.com](mailto:info-usa@enzolifesciences.com)

European Sales Office
ENZO LIFE SCIENCES
(ELS) AG
Phone: +41 61 926 8989
[info-
eu@enzolifesciences.com](mailto:info-eu@enzolifesciences.com)

Belgium, The Netherlands
& Luxembourg
Phone: +32 3 466 0420
[info-
be@enzolifesciences.com](mailto:info-be@enzolifesciences.com)

France
Phone: +33 472 440 655
[info-
fr@enzolifesciences.com](mailto:info-fr@enzolifesciences.com)

Germany
Phone: +49 7621 5500 526
[info-
de@enzolifesciences.com](mailto:info-de@enzolifesciences.com)

UK & Ireland
Phone (UK customers):
0845 601 1488
Phone: +44 1392 825900
[info-
uk@enzolifesciences.com](mailto:info-uk@enzolifesciences.com)