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 AMP'D® HSP70 high sensitivity ELISA kit is a colorimetric immunometric enzyme immunoassay kit with results in 4.5 hours.

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.

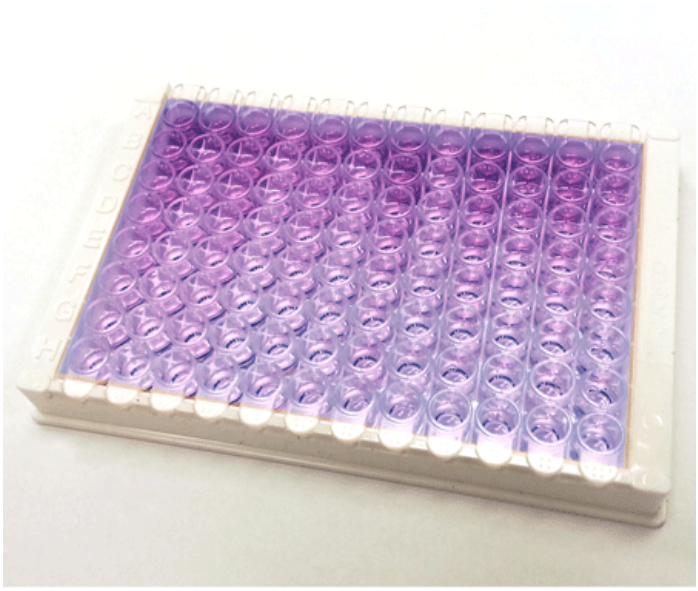
Citations: 9 View Online »

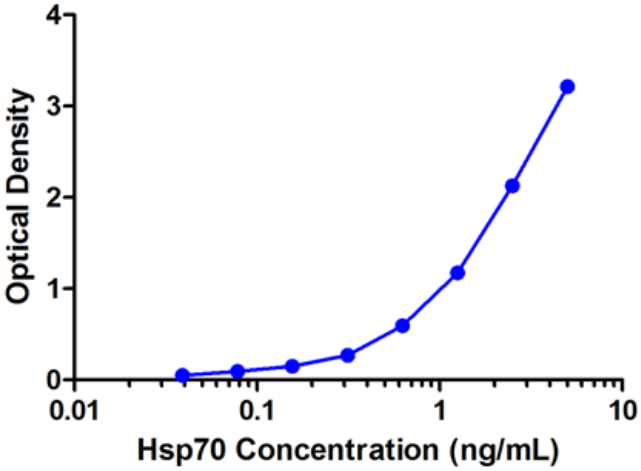
Ordering Information Order Online »

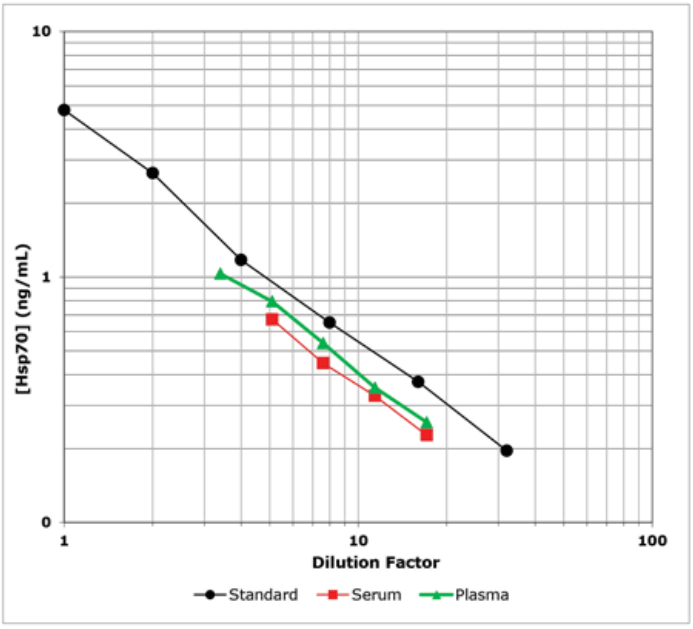
ENZ-KIT-101-0001	96 wells

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




Optical Density
4
3
2
1
0
0.01
0.1
1
10
Hsp70 Concentration (ng/mL)


10
1
0
[Hsp70] (ng/mL)
1
10
100
Dilution Factor
Standard
Serum
Plasma


Enzo
Life Sciences
Assay Buffer 28

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

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