Rat heat shock protein 70,hSP-70 ELISA Kit

Product Code	CSB-E08308r
Abbreviation	HSPA1A
Protein Biological Process 1	Neurobiology
Target Name	heat shock 70kDa protein 1A
Uniprot No.	P0DMW0
Alias	DAQB-147D11.1, FLJ54303, FLJ54370, FLJ54392, FLJ54408, FLJ75127, HSP70-1, HSP70-1A, HSP70I, HSP72, HSPA1, HSPA1B, dnaK-type molecular chaperone HSP70-1|heat shock 70kD protein 1A|heat shock-induced
Product Type	ELISA Kit
Immunogen Species	Rattus norvegicus (Rat)
Protein Biological Process 3	Stress response
Sample Types	serum, plasma, tissue homogenates
Detection Range	62.5 pg/mL-4000 pg/mL
Sensitivity	15.6 pg/mL
Assay Time	1-5h
Sample Volume	50-100ul
Detection Wavelength	450 nm
Lead Time	3-5 working days after you place the order, and it takes another 3-5 days for delivery via DHL or FedEx.
Research Area	Neuroscience
Gene Names	Hspa1a
Tag Info	quantitative
Protein Description	Sandwich

Description

The rat Hsp70 ELISA Kit is suitable for qualitatively determining rat Hsp70 levels from samples including serum, plasma, or tissue homogenates. It uses the Sandwich-ELISA mechanism in combination with the enzyme-substrate chromogenic reaction to measure the Hsp70 content in the sample. The color intensity is positively correlated with Hsp70 content in the sample. The Hsp70 concentration can be calculated according to the standard curve. This kit is tested with high sensitivity, strong specificity, good linearity, high precision and recovery, as well as lot-to-lot consistency.

Hsp70 supports a plethora of functions that help maintain cellular protein homeostasis and promote the differentiation and survival of red blood cells. It

modulates dormancy and cell cycle quiescence of erythroid precursor cells and checks the fitness of erythroblasts at the initiation of erythropoiesis. Increased expression and secretion of Hsp70 are related to asthma and are mostly found in the acute phase of inflammation or exacerbation. Hsp70 also plays both pro-inflammatory and anti-inflammatory effects in airway inflammation.

Target Details

This intronless gene encodes a 70kDa heat shock protein which is a member of the heat shock protein 70 family. In conjuction with other heat shock proteins, this protein stabilizes existing proteins against aggregation and mediates the folding of newly translated proteins in the cytosol and in organelles. It is also involved in the ubiquitin-proteasome pathway through interaction with the AU-rich element RNA-binding protein 1. The gene is located in the major histocompatibility complex class III region, in a cluster with two closely related genes which encode similar proteins.

Product Precision

Intra-assay Precision (Precision within an assay): CV%<8%
Three samples of known concentration were tested twenty times on one plate to assess.
Inter-assay Precision (Precision between assays): CV%<10%
Three samples of known concentration were tested in twenty assays to assess.

Linearity

To assess the linearity of the assay, samples were spiked with high concentrations of rat hSP-70 in various matrices and diluted with the Sample Diluent to produce samples with values within the dynamic range of the assay.

?	Sample	Serum(n=4)
1:100	Average %	92
	Range %	88-95
1:200	Average %	103
	Range %	99-107
1:400	Average %	92
	Range %	86-96
1:800	Average %	98
	Range %	94-101

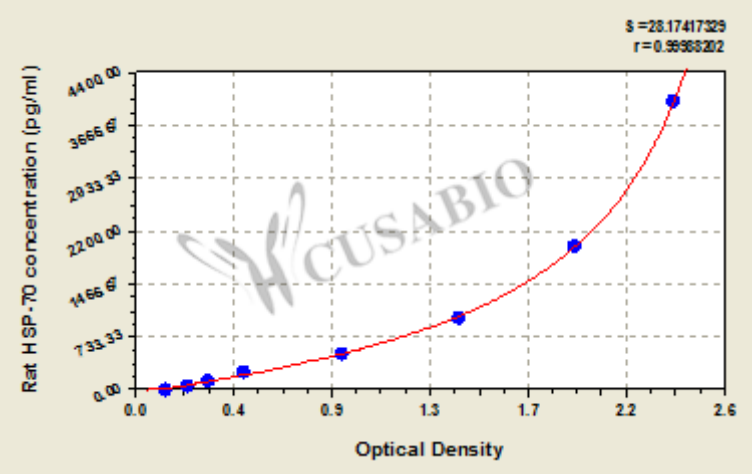
Recovery

The recovery of rat hSP-70 spiked to levels throughout the range of the assay in various matrices was evaluated. Samples were diluted prior to assay as directed in the Sample Preparation section.

Sample Type	Average % Recovery	Range
Serum (n=5)	94	91-97
EDTA plasma (n=4)	95	91-98

Typical

These standard curves are provided for demonstration only. A standard curve should be generated for each set of samples assayed.



pg/ml	OD1	OD2	Average	Corrected
4000	2.402	2.333	2.368	2.226
2000	1.946	1.926	1.936	1.794
1000	1.422	1.433	1.428	1.286
500	0.911	0.924	0.918	0.776
250	0.477	0.491	0.484	0.342
125	0.332	0.323	0.328	0.186
62.5	0.244	0.237	0.241	0.099
0	0.143	0.141	0.142	?

Msds

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