

Datasheet for ABIN921115

HSP27 ELISA Kit**1** Image**1** Publication[Go to Product page](#)

Overview

Quantity:	96 tests
Target:	HSP27 (HSPB1)
Binding Specificity:	AA 2-205
Reactivity:	Human
Method Type:	Sandwich ELISA
Detection Range:	62.5-4000 pg/mL
Minimum Detection Limit:	62.5 pg/mL
Application:	ELISA

Product Details

Purpose:	Sandwich High Sensitivity ELISA kit for Quantitative Detection of Human HSP27
Brand:	PicoKine™
Sample Type:	Cell Culture Supernatant, Cell Lysate, Serum, Plasma (heparin), Plasma (EDTA), Tissue Homogenate
Analytical Method:	Quantitative
Detection Method:	Colorimetric
Immunogen:	Expression system for standard: E.coli Immunogen sequence: T2-K205
Specificity:	Expression system for standard: E.coli Immunogen sequence: T2-K205

Product Details

Cross-Reactivity (Details):	There is no detectable cross-reactivity with other relevant proteins.
Sensitivity:	<5pg/mL
Material not included:	Microplate reader in standard size. Automated plate washer. Adjustable pipettes and pipette tips. Multichannel pipettes are recommended in the condition of large amount of samples in the detection. Clean tubes and Eppendorf tubes. Washing buffer (neutral PBS or TBS). Preparation of 0.01M TBS: Add 1.2g Tris, 8.5g NaCl

Target Details

Target:	HSP27 (HSPB1)
Alternative Name:	HSPB1 (HSPB1 Products)
Background:	<p>Protein Function: Involved in stress resistance and actin organization.</p> <p>Background: Hsp27 is a chaperone of the sHsp(small heat shock protein) group among ubiquitin, alpha-crystallin, Hsp20 and others. The common functions of sHsps are chaperone activity, thermotolerance, inhibition of apoptosis, regulation of cell development, and cell differentiation. They also take part in signal transduction. The HSP27 gene has 3 exons. The mouse Hsp25 gene was mapped to chromosome 5 in a region homologous to 7q in the human. They also mapped the mouse Hsp105 gene to chromosome 5 but suggested that the human homolog is probably on 13q, not chromosome 7. The standard used in this kit is recombinant human HSP27, consisting of 205 amino acids with the molecular mass of 22.7 kDa.</p> <p>Synonyms: Heat shock protein beta-1,HspB1,28 kDa heat shock protein,Estrogen-regulated 24 kDa protein,Heat shock 27 kDa protein,HSP 27,Stress-responsive protein 27,SRP27,HSPB1,HSP27, HSP28,</p> <p>Full Gene Name: Heat shock protein beta-1</p> <p>Cellular Localisation: Cytoplasm. Nucleus. Cytoplasm, cytoskeleton, spindle. Cytoplasmic in interphase cells. Colocalizes with mitotic spindles in mitotic cells. Translocates to the nucleus during heat shock and resides in sub-nuclear structures known as SC35 speckles or nuclear splicing speckles.</p>
Gene ID:	3315
UniProt:	P04792
Pathways:	MAPK Signaling , Regulation of Actin Filament Polymerization , Signaling Events mediated by VEGFR1 and VEGFR2 , Negative Regulation of intrinsic apoptotic Signaling , VEGF Signaling

Application Details

Application Notes:	Before using Kit, spin tubes and bring down all components to bottom of tube. Duplicate well assay was recommended for both standard and sample testing.
Comment:	<p>Sequence similarities: Belongs to the small heat shock protein (HSP20) family.</p> <p>Tissue Specificity: Detected in all tissues tested: skeletal muscle, heart, aorta, large intestine, small intestine, stomach, esophagus, bladder, adrenal gland, thyroid, pancreas, testis, adipose tissue, kidney, liver, spleen, cerebral cortex, blood serum and cerebrospinal fluid. Highest levels are found in the heart and in tissues composed of striated and smooth muscle. .</p>
Plate:	Pre-coated
Protocol:	human HSP27 ELISA Kit was based on standard sandwich enzyme-linked immune-sorbent assay technology. A monoclonal antibody from mouse specific for HSP27 has been precoated onto 96-well plates. Standards(E.coli, T2-K205) and test samples are added to the wells, a biotinylated detection polyclonal antibody from goat specific for HSP27 is added subsequently and then followed by washing with PBS or TBS buffer. Avidin-Biotin-Peroxidase Complex was added and unbound conjugates were washed away with PBS or TBS buffer. HRP substrate TMB was used to visualize HRP enzymatic reaction. TMB was catalyzed by HRP to produce a blue color product that changed into yellow after adding acidic stop solution. The density of yellow is proportional to the human HSP27 amount of sample captured in plate.
Assay Procedure:	Aliquot 0.1 mL per well of the 4000pg/mL, 2000pg/mL,1000pg/mL, 500pg/mL, 250pg/mL, 125pg/mL, 62.5pg/mL human HSP27 standard solutions into the precoated 96-well plate. Add 0.1 mL of the sample diluent buffer into the control well (Zero well). Add 0.1 mL of each properly diluted sample of human cell culture supernates, cell lysates, serum, plasma(heparin, EDTA) or tissue homogenates to each empty well. See "Sample Dilution Guideline" above for details. It is recommended that each human HSP27 standard solution and each sample be measured in duplicate.
Assay Precision:	<ul style="list-style-type: none">• Sample 1: n=16, Mean(pg/ml): 256, Standard deviation: 10.75, CV(%): 4.2• Sample 2: n=16, Mean(pg/ml): 1369, Standard deviation: 73.9, CV(%): 5.4• Sample 3: n=16, Mean(pg/ml): 2628, Standard deviation: 144.5, CV(%): 5.5,• Sample 1: n=24, Mean(pg/ml): 279, Standard deviation: 17.6, CV(%): 6.3• Sample 2: n=24, Mean(pg/ml): 1406, Standard deviation: 105.45, CV(%): 7.5• Sample 3: n=24, Mean(pg/ml): 2635, Standard deviation: 213.4, CV(%): 8.1
Restrictions:	For Research Use only

Handling

Handling Advice:	Avoid multiple freeze-thaw cycles.
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Handling

Storage:	-20 °C,4 °C
Storage Comment:	Store at 4°C for 6 months, at -20°C for 12 months. Avoid multiple freeze-thaw cycles
Expiry Date:	12 months

Publications

Product cited in: Ünver, Deveci, Kırkıl, Telo, Kaman, Kuluöztürk: "Serum Heat Shock Protein Levels and the Relationship of Heat Shock Proteins with Various Parameters in Chronic Obstructive Pulmonary Disease Patients." in: **Turkish thoracic journal**, Vol. 17, Issue 4, pp. 153-159, (2018) ([PubMed](#)).

Images

