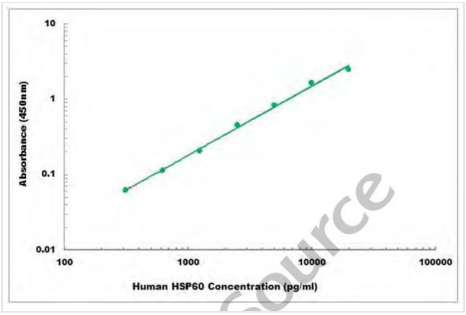
HSP60 (HSPD1) ELISA Kit for Human

PRODUCT OVERVIEW

Product Name	HSP60 (HSPD1), ELISA Kit
Full Product Name	Human HSP60 ELISA Kit
Product Gene Name	HSPD1 elisa kit
Product Synonym Names	HSP60; 60 kDa heat shock protein, mitochondrial; 60 kDa chaperonin; Chaperonin 60; CPN60; Heat shock protein 60; HSP-60; Hsp60; HuCHA60; Mitochondrial matrix protein P1; P60 lymphocyte protein
Species Reactivity	Human
Samples	Culture Supernates, Serum, Plasma, Cell Lysates, Tissue Homogenates
Sensitivity	< 150 pg/ml
Specificity	The Human HSP60 ELISA Kit allows for the detection and quantification of endogenous levels of natural and/or recombinant Human HSP60 proteins within the range of 312 pg/ml - 20,000 pg/ml.
Preparation and Storage	Store at 4 degree C for 6 months, store at -20 degree C for one year. Avoid freeze/thaw cycles.
Molecular Weight	17,100 Da
OMIM	M22382 mRNA
3D Structure	ModBase 3D Structure for P10809
Related Product Information for HSPD1 elisa kit	Background: Heat shock proteins (HSPs) are a family of highly conserved stress response proteins. Heat shock proteins function primarily as molecular chaperones by facilitating the folding of other cellular proteins, preventing protein aggregation or targeting improperly folded proteins to specific degradative pathways. HSPs are typically expressed at low levels under normal physiological conditions but are dramatically upregulated in response to cellular stress. Heat Shock Protein 60 (HSP60), also known as Chaperonin 60 (CPN60), is a mitochondrial matrix protein belonging to a highly conserved family of molecular chaperone and stress response proteins. HSP60 plays a role in stabilizing and refolding proteins in response to heat-shock or other cellular stress. Principle of the Assay: The Human HSP60 ELISA (Enzyme-Linked Immunosorbent Assay) kit is an in vitro enzyme-linked immunosorbent assay for the quantitative measurement of Human HSP60 in Cell Culture Supernates, Serum, Plasma, Cell Lysates, Tissue Homogenates. This assay employs an antibody specific for Human HSP60 coated on a 96-well plate. Standards and samples are pipetted into the wells and HSP60 present in a sample is bound to the wells by the immobilized antibody. The wells are washed and biotinylated anti-Human HSP60 antibody is added. After washing away unbound biotinylated antibody, HRP-conjugated streptavidin is pipetted to the wells. The wells are again washed, a TMB substrate solution is added to the wells and color develops in proportion to the amount of HSP60 bound. The Stop Solution changes the color from blue to yellow, and the intensity of the color is measured at 450 nm.
Other Notes	Small volumes of HSPD1 elisa kit vial(s) may occasionally become entrapped in the seal of the product vial during shipment and storage. If necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the container`s cap. Certain products may require to ship with dry ice and additional dry ice fee may apply.
Searchable Terms for HSPD1 purchase	MBS8291358 is a ready-to-use microwell, strip-or-full plate ELISA (enzyme-linked immunosorbent assay) Kit for analyzing the presence of the HSP60 (HSPD1) ELISA Kit target analytes in biological samples. The concentration gradients of the kit standards or positive controls render a theoretical kit detection range in biological research samples containing HSPD1. The ELISA analytical biochemical technique of the MBS8291358 kit is based on HSPD1 antibody-HSPD1 antigen interactions (immunosorbency) and an HRP colorimetric detection system to detect HSPD1 antigen targets in samples. The ELISA Kit is designed to detect native, not recombinant, HSPD1. Appropriate sample types may include undiluted body fluids and/or tissue homogenates, secretions. Quality control assays assessing reproducibility identified the intra-assay CV (%) and inter-assay CV(%).



Typical Testing Data/Standard Curve (for reference only) of HSPD1 elisa kit

ADDITIONAL DETAILS

NCBI/Uniprot data below describe general gene information for HSPD1. It may not necessarily be applicable to this product.

NCBI GI #	31542947
NCBI GeneID	3329
NCBI Accession #	NP_002147.2
UniProt Primary Accession #	P10809
UniProt Secondary Accession #	Q38L19; Q9UCR6; B2R5M6; B7Z712
UniProt Related Accession #	P10809
GenBank Nucleotide #	NM_002156.4
NCBI Official Full Name	60 kDa heat shock protein, mitochondrial
NCBI Official Synonym Full Names	heat shock protein family D (Hsp60) member 1
NCBI Official Symbol	HSPD1
NCBI Official Synonym Symbols	HLD4; CPN60; GROEL; HSP60; HSP65; SPG13; HSP-60; HuCHA60
UniProt Protein Name	60 kDa heat shock protein, mitochondrial
UniProt Synonym Protein Names	60 kDa chaperonin; Chaperonin 60; CPN60; Heat shock protein 60; HSP-60; Hsp60; HuCHA60; Mitochondrial matrix protein P1; P60 lymphocyte protein
Protein Family	60 kDa heat shock protein
UniProt Gene Name	HSPD1
UniProt Synonym Gene Names	HSP60; CPN60; HSP-60; Hsp60
NCBI Protein Information	60 kDa heat shock protein, mitochondrial
NCBI Summary for HSPD1	This gene encodes a member of the chaperonin family. The encoded mitochondrial protein may function as a signaling molecule in the innate immune system. This protein is essential for the folding and assembly of newly imported proteins in the mitochondria. This gene is adjacent to a related family member and the region between the 2 genes functions as a bidirectional promoter. Several pseudogenes have been associated with this gene. Two transcript variants encoding the same protein have been identified for this gene. Mutations associated with this gene cause autosomal recessive spastic paraplegia 13. [provided by RefSeq, Jun 2010]

UniProt Comments for HSPD1	Chaperonin implicated in mitochondrial protein import and macromolecular assembly. Together with Hsp10, facilitates the correct folding of imported proteins. May also prevent misfolding and promote the refolding and proper assembly of unfolded polypeptides generated under stress conditions in the mitochondrial matrix (PubMed:1346131, PubMed:11422376). The functional units of these chaperonins consist of heptameric rings of the large subunit Hsp60, which function as a back-to-back double ring. In a cyclic reaction, Hsp60 ring complexes bind one unfolded substrate protein per ring, followed by the binding of ATP and association with 2 heptameric rings of the co-chaperonin Hsp10. This leads to sequestration of the substrate protein in the inner cavity of Hsp60 where, for a certain period of time, it can fold undisturbed by other cell components. Synchronous hydrolysis of ATP in all Hsp60 subunits results in the dissociation of the chaperonin rings and the release of ADP and the folded substrate protein (Probable).
Research Articles on HSPD1	**1.** HSP60 regulation of SOX9 ubiquitination mitigates the development of knee osteoarthritis.
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