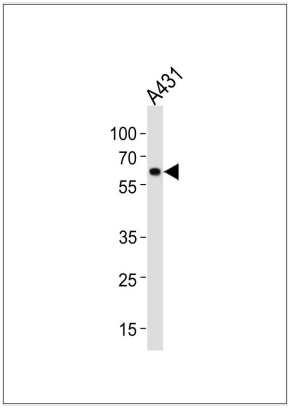
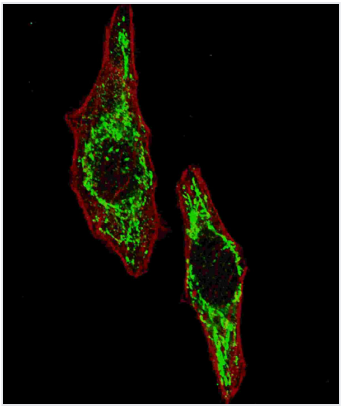
HSPD1 Antibody – Rabbit Polyclonal

PRODUCT OVERVIEW

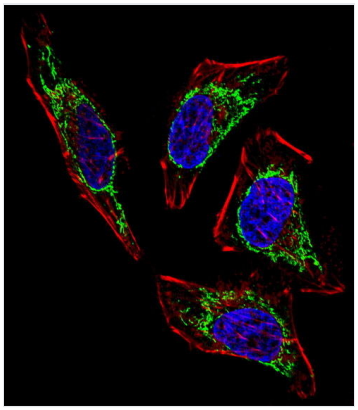
Product Name	HSPD1, Polyclonal Antibody
Full Product Name	HSPD1, ID (60kD Heat Shock Protein, Mitochondrial, Heat Shock Protein 60, 60kD Chaperonin, Chaperonin 60, Mitochondrial Matrix Protein P1, P60 Lymphocyte Protein, HuCHA60, HSP60) (MaxLight 550)
Product Gene Name	anti-HSPD1 antibody
Clonality	Polyclonal
Isotype	IgG
Host	Rabbit
Species Reactivity	Human
Form/Format	Supplied as a liquid in PBS, pH 7.2. No preservative added. Labeled with MaxLight550.
Purity/Purification	Purified by Ammonium Sulfate Precipitation.
Specificity	Recognizes human HSPD1.
Preparation and Storage	Store product at 4 degree C in the dark. DO NOT FREEZE! Stable at 4 degree C for 12 months after receipt as an undiluted liquid. Dilute required amount only prior to immediate use. Further dilutions can be made in assay buffer. Caution: MaxLight550 conjugates are sensitive to light. For maximum recovery of product, centrifuge the original vial prior to removing the cap.
Molecular Weight	17,100 Da
OMIM	118190
3D Structure	ModBase 3D Structure for P10809
Immunogen	Synthetic peptide selected from the center region of human HSPD1 (KLH).
Conjugate	MaxLight550
Note	Preservative Free
Product Categories/Family for anti-HSPD1 antibody	Antibodies; Heat Shock Proteins
Applications Tested/Suitable for anti-HSPD1 antibody	Western Blot (WB), FLISA
Application Notes for anti-HSPD1 antibody	WB: 1:50-1:100 FLISA: 1:1,000 Applications are based on unconjugated antibody.
Related Product Information for anti-HSPD1 antibody	MBS6479758 is an antibody targeting HSPD1. Also known as HSPD1, ID (60kD Heat Shock Protein, Mitochondrial, Heat Shock Protein 60, 60kD Chaperonin, Chaperonin 60, Mitochondrial Matrix Protein P1, P60 Lymphocyte Protein, HuCHA60, HSP60) (MaxLight 550). Reactive in Human. Host: Rabbit.
Product References and Citations for anti-HSPD1 antibody	1. Venner T.J., Singh B., Gupta R.S.DNA Cell Biol. 9:545-552(1990). 2. Hansen J.J., Bross P., Westergaard M., Nielsen M.N., Eiberg H., Hum. Genet. 112:71-77(2003). 3. Rasmussen R.K., Ji H., Eddes J.S., Moritz R.L., Electrophoresis 18:588-598(1997). 4. Aboulaich N., Vainonen J.P., Stralfors P., Vener A.V.Biochem. J. 383:237-248(2004).
Other Notes	Small volumes of anti-HSPD1 antibody 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.



Western Blot (WB) of anti-HSPD1 antibody
HSPD1 Antibody (Center) western blot analysis in A431 cell line lysates (35ug/lane).This demonstrates the HSPD1 antibody detected the HSPD1 protein (arrow).



Immunofluorescence (IF) of anti-HSPD1 antibody
Fluorescent image of U251 cells stained with HSPD1 (Center) antibody. U251 cells were fixed with 4% PFA (20 min), permeabilized with Triton X-100 (0.2%, 30 min). Cells were then incubated with AP2859C HSPD1 (Center) primary antibody (1:100, 2 h at room temperature). For secondary antibody, Alexa Fluor 488 conjugated donkey anti-rabbit antibody (green) was used (1:1000, 1h). Cytoplasmic actin was counterstained with Alexa Fluor 555 (red) conjugated Phalloidin (5.25 uM, 25 min). Pictures were taken on a Biorevo microscope (BZ-900, Keyence). Note the highly specific localization of the HSPD1 mainly to the mitochondria, supported by Human Protein Atlas Data.



Immunofluorescence (IF) of anti-HSPD1 antibody
Fluorescent confocal image of Hela cell stained with HSPD1 Antibody (Center). Hela cells were fixed with 4% PFA (20 min), permeabilized with Triton X-100 (0.1%, 10 min), then incubated with HSPD1 primary antibody (1:25, 1 h at 37 degree C). For secondary antibody, Alexa Fluor 488 conjugated donkey anti-rabbit antibody (green) was used (1:400, 50 min at 37 degree C).Cytoplasmic actin was counterstained with Alexa Fluor 555 (red) conjugated Phalloidin (7units/ml, 1 h at 37 degree C). Nuclei were counterstained with DAPI (blue) (10 ug/ml, 10 min). HSPD1 immunoreactivity is localized to Mitochondria significantly.

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
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
UniProt Entry Name	CH60_HUMAN
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	HSP60: Implicated in mitochondrial protein import and macromolecular assembly. May facilitate 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. Interacts with HRAS. Interacts with HBV protein X and HTLV-1 protein p40tax. Belongs to the chaperonin (HSP60) family. Protein type: Chaperone; Mitochondrial Chromosomal Location of Human Ortholog: 2q33.1 Cellular Component: extracellular space; protein complex; cell surface; mitochondrion; early endosome; coated pit; cytosol; secretory granule; membrane; mitochondrial matrix; cytoplasm; mitochondrial inner membrane; plasma membrane; lipopolysaccharide receptor complex; cyclin-dependent protein kinase activating kinase holoenzyme complex Molecular Function: protein binding; lipopolysaccharide binding; p53 binding; ubiquitin protein ligase binding; chaperone binding; unfolded protein binding; double-stranded RNA binding; ATPase activity; DNA replication origin binding; ATP binding; single-stranded DNA binding Biological Process: caspase activation; B cell proliferation; viral reproduction; B cell activation; protein stabilization; T cell activation; positive regulation of interleukin-12 production; positive regulation of apoptosis; protein maturation; isotype switching to IgG isotypes; positive regulation of interleukin-6 production; B cell cytokine production; positive regulation of interleukin-10 production; response to unfolded protein; MyD88-dependent toll-like receptor signaling pathway; positive regulation of interferon-gamma production; 'de novo' protein folding; protein refolding; positive regulation of T cell mediated immune response to tumor cell; positive regulation of T cell activation; chaperone-mediated protein complex assembly; positive regulation of interferon-alpha production; negative regulation of apoptosis; positive regulation of macrophage activation Disease: Spastic Paraplegia 13, Autosomal Dominant; Leukodystrophy, Hypomyelinating, 4
Research Articles on HSPD1	**1.** Clinical data showed that upregulation of miR-382/3-NT and downregulation of HSPD1/Trx were also observed in IgA nephropathy patients with renal interstitial fibrosis. These data supported a novel mechanism in which miR-382 targets HSPD1 and contributes to the redox imbalance in the development of renal fibrosis.
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