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Product datasheet for MG222671

Hspd1 (NM_010477) Mouse Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Hspd1 (NM_010477) Mouse Tagged ORF Clone
Tag:	TurboGFP
Symbol:	Hspd1
Synonyms:	60kDa; CPN60; HSP-60; HSP-65; Hsp60
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)

ORF Nucleotide Sequence:

>MG222671 representing NM_010477
Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCCGCGATCGCC

ATGCTTCGACTACCCACAGTCCTTCGCCAGATGAGACCAGTGTCCCGGGCACTGGCTCCTCATCTCACTC
GGGCCTATGCCAAAGATGTAAAATTTGGTGCGGACGCTCGAGCCTTAATGCTTCAAGGTGTAGACCTTTT
AGCAGATGCTGTAGCTGTTACAATGGGGCCAAAGGGAAGAACTGTGATTATTGAACAGAGTTGGGGAAGT
CCCAAAGTAACAAAAGATGGGGTCACTGTTGCAAAGTCAATTGATTTAAAGGATAAATACAAAAATATTG
GAGCTAAACTTGTTCAGGACGTTGCCAATAACACAAACGAAGAGGCTGGGGATGGCACCACCACTGCCAC
TGTTCTGGCACGATCTATTGCCAAGGAGGGCTTTGAGAAGATCAGCAAAGGGGCTAATCCAGTGGAAATC
CGGAGAGGTGTGATGTTGGCTGTGGATGCTGTAATTGCTGAACTTAAGAAACAGTCTAAACCTGTGACAA
CCCCTGAAGAAATTGCTCAGGTTGCTACAATTTCTGCAAATGGAGACAAAGACATTGGGAACATCATTTC
TGATGCAATGAAAAAGGTTGGAAGAAAGGGTGTCATCACAGTGAAGGATGGAAAAACCCTGAATGATGAG
CTAGAAATTATTGAAGGCATGAAGTTTGATAGAGGATATATTTCCCCGTATTTTATTAACACATCAAAAG
GTCAAAAGTGTGAATTCCAAGATGCCTATGTCTTGTTGAGTGAAAAGAAAATTTCCAGTGTTCAGTCCAT
TGTCCCTGCTCTTGAAATTGCTAATGCTCATCGGAAGCCATTGGTCATAATCGCCGAAGACGTTGACGGA
GAAGCTCTAAGCACGCTGGTTTTGAACAGGCTAAAAGTTGGTCTTCAGGTTGTGGCAGTCAAAGCTCCAG
GATTTGGGGACAATAGGAAGAACCAGCTTAAAGATATGGCTATTGCTACTGGTGGTGCAGTGTTTGGAGA
AGAGGGGTTGAATCTAAATCTTGAAGATGTTCAAGCTCATGACTTAGGAAAAGTTGGGGAGGTCATTGTC
ACCAAAGATGATGCCATGCTTTTGAAAGGAAAAGGTGACAAAGCTCACATTGAAAAACGTATTCAAGAAA
TCACTGAGCAGCTAGACATCACAACTAGTGAATATGAAAAAGAAAAGCTGAACGAGCGACTTGCTAAACT
TTCAGATGGAGTAGCTGTGTTGAAGGTTGGAGGAACAAGTGATGTTGAAGTGAATGAGAAAAAAGACAGA
GTTACTGATGCTCTCAATGCTACAAGAGCAGCTGTTGAAGAAGGCATTGTTCTAGGAGGGGGCTGCGCTC
TGCTTCGGTGCATCCCAGCCTTGGATTCATTAAAGCCTGCTAATGAAGACCAGAAAATAGGTATAGAAAT
TATTAAAAGAGCACTTAAAATTCCTGCAATGACGATTGCTAAGAATGCAGGTGTTGAAGGATCTTTGATA
GTTGAGAAAATTCTGCAGAGTTCCTCAGAAGTTGGTTATGACGCCATGCTTGGAGATTTTGTGAACATGG
TGGAAAAAGGGATCATTGATCCAACAAAGGTTGTGAGAACTGCCTTACTGGATGCTGCTGGGGTGGCCTC
CTTGCTAACTACAGCCGAAGCTGTAGTGACAGAAATTCCTAAAGAAGAGAAGGACCCTGGAATGGGTGCA
ATGGGTGGCATGGGAGGGGGTATGGGAGGCGGCATGTTC

ACGCGTACGCGGCCGCTCGAG – GFP Tag – GTTTAA

Protein Sequence:

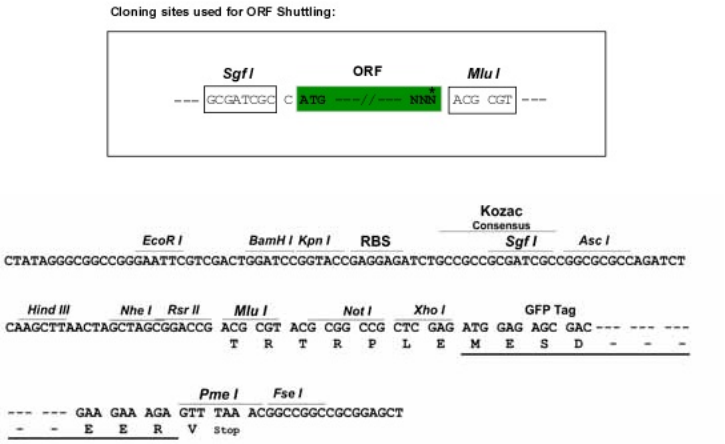
>MG222671 representing NM_010477
Red=Cloning site Green=Tags(s)

MLRLPTVLRQMRPVSRALAPHLTRAYAKDVKFGADARALMLQGVDLLADAVAVTMGPKGRTVIIEQSWGS
PKVTKDGVTVAKSIDLKDKYKNIGAKLVQDVANNTNEEAGDGTTTATVLARSIAKEGFEKISKGANPVEI
RRGVMLAVDAVIAELKKQSKPVTTPEEIAQVATISANGDKDIGNIISDAMKKVGRKGVITVKDGKTLNDE
LEIIEGMKFDRGYISPYFINTSKGQKCEFQDAYVLLSEKKISSVQSIVPALEIANAHRKPLVIIAEDVDG
EALSTLVLNRLKVGLQVVAVKAPGFGDNRKNQLKDMAIATGGAVFGEEGLNLNLEDVQAHDLGKVGEVIV
TKDDAMLLKGKGDKAHIEKRIQEITEQLDITTSEYEKEKLNERLAKLSDGVAVLKVGGTSDVEVNEKKDR
VTDALNATRAAVEEGIVLGGGCALLRCIPALDSLKPANEDQKIGIEIIKRALKIPAMTIAKNAGVEGSLI
VEKILQSSSEVGYDAMLGDFVNMVEKGIIDPTKVVRTALLDAAGVASLLTTAEAVVTEIPKEEKDPGMGA
MGGMGGGMGGGMF

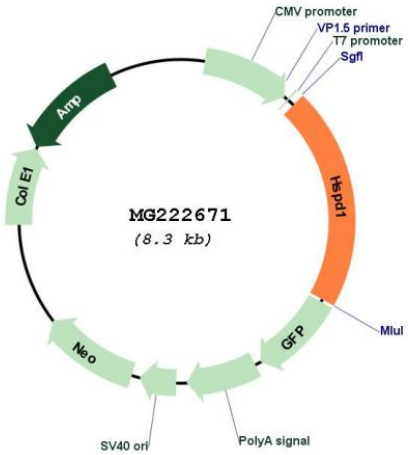
TRTRPLE – GFP Tag – V

Restriction Sites: SgfI-MluI

Cloning Scheme:



Plasmid Map:



ACCN: NM_010477

ORF Size: 1719 bp

OTI Disclaimer:	Due to the inherent nature of this plasmid, standard methods to replicate additional amounts of DNA in E. coli are highly likely to result in mutations and/or rearrangements. Therefore, OriGene does not guarantee the capability to replicate this plasmid DNA. Additional amounts of DNA can be purchased from OriGene with batch-specific, full-sequence verification at a reduced cost. Please contact our customer care team at custsupport@origene.com or by calling 301.340.3188 option 3 for pricing and delivery. The molecular sequence of this clone aligns with the gene accession number as a point of reference only. However, individual transcript sequences of the same gene can differ through naturally occurring variations (e.g. polymorphisms), each with its own valid existence. This clone is substantially in agreement with the reference, but a complete review of all prevailing variants is recommended prior to use. More info
OTI Annotation:	This clone was engineered to express the complete ORF with an expression tag. Expression varies depending on the nature of the gene.
Components:	The ORF clone is ion-exchange column purified and shipped in a 2D barcoded Matrix tube containing 10ug of transfection-ready, dried plasmid DNA (reconstitute with 100 ul of water).
Reconstitution Method:	1. Centrifuge at 5,000xg for 5min. 2. Carefully open the tube and add 100ul of sterile water to dissolve the DNA. 3. Close the tube and incubate for 10 minutes at room temperature. 4. Briefly vortex the tube and then do a quick spin (less than 5000xg) to concentrate the liquid at the bottom. 5. Store the suspended plasmid at -20°C. The DNA is stable for at least one year from date of shipping when stored at -20°C.
RefSeq:	NM_010477.4, NP_034607.3
RefSeq Size:	2347 bp
RefSeq ORF:	1722 bp
Locus ID:	15510
UniProt ID:	P63038
Cytogenetics:	1 C1.2

Gene Summary: 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. 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. [UniProtKB/Swiss-Prot Function]