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Product datasheet for MR209728

Hspa8 (BC085486) Mouse Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Hspa8 (BC085486) Mouse Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	Hspa8
Synonyms:	Hsc73, Hsc71, Hsp73, Hspa10
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)

ORF Nucleotide Sequence:

>MR209728 ORF sequence
Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCCGCGATCGCC

ATGTCTAAGGGACCTGCAGTTGGCATTGATCTCGGCACCACCTACTCCTGTGTGGGTGTCTTCCAGCATG
GAAAGGTGGAAATTATTGCCAATGACCAGGGTAACCGCACCACGCCAAGCTATGTTGCTTTCACGGACAC
AGAGAGATTAATTGGGGATGCGGCCAAGAATCAGGTTGCAATGAACCCCACCAACACAGTTTTTGATGCC
AAACGTCTGATCGGGCGTAGGTTTGATGATGCTGTTGTTCAGTCTGATATGAAGCACTGGCCCTTCATGG
TGGTGAATGATGCAGGCAGGCCCAAGGTCCAAGTGGAATACAAAGGGGAGACAAAAAGTTTCTACCCAGA
GGAAGTGTCCTCCATGGTTCTGACAAAGATGAAGGAAATTGCAGAAGCGTACCTCGGAAAGACCGTTACC
AACGCTGTGGTCACAGTGCCCGCTTACTTCAATGACTCTCAGCGACAGGCAACAAAAGATGCTGGAACTA
TTGCTGGCCTCAATGTACTTCGAATCATCAATGAACCAACTGCTGCTGCTATTGCTTACGGCTTAGATAA
GAAGGTCGGAGCTGAAAGGAATGTGCTCATTTTTGACTTGGGAGGTGGCACTTTTGATGTGTCAATCCTC
ACTATTGAGGATGGAATTTTTGAGGTCAAATCAACAGCTGGAGACACCCACTTAGGTGGAGAAGATTTTG
ACAACCGAATGGTCAATCATTTCATTGCTGAGTTCAAGCGAAAGCACAAGAAAGACATCAGTGAGAACAA
GAGAGCTGTCCGCCGTCTCCGCACGGCCTGCGAGCGGGCCAAGCGCACCCTCTCCTCCAGCACCCAGGCC
AGTATTGAGATTGATTCTCTCTATGAGGGAATTGACTTCTATACCTCCATTACCCGGGCTCGATTTGAGG
AGTTGAATGCTGACCTGTTCCGTGGCACACTGGACCCTGTAGAGAAGGCCCTTCGAGATGCCAAGCTGGA
CAAGTCACAGATCCATGATATTGTCTTGGTGGGTGGTTCTACCAGAATCCCCAAGATTCAGAAACTTCTG
CAAGACTTCTTCAATGGAAAAGAGCTGAACAAGAGCATTAACCCCGATGAAGCTGTTGCCTATGGTGCAG
CTGTCCAGGCAGCCATTCTATCTGGAGACAAGTCTGAGAACGTTCAGGATTTGCTGCTCTTGGATGTCAC
TCCTCTTTCCCTTGGTATTGAAACTGCTGGCGGAGTCATGACTGTCCTCATCAAGCGCAATACCACCATC
CCCACCAAGCAGACACAGACTTTCACCACCTACTCTGACAACCAGCCTGGTGTACTCATTCAGGTGTATG
AAGGTGAAAGGGCCATGACCAAGGACAACAACCTGCTTGGAAAGTTCGAGCTCACAGGCATCCCTCCAGC
ACCCCGTGGGGTCCCTCAGATTGAGGTTACTTTTGACATCGATGCCAATGGCATCCTCAATGTTTCTGCT
GTAGATAAGAGCACAGGAAAGGAGAACAAGATCACCATCACCAATGACAAGGGCCGCTTGAGTAAGGAAG
ATATTGAGCGCATGGTCCAAGAAGCTGAGAAGTACAAGGCTGAGGATGAGAAGCAGAGAGATAAGGTTTC
CTCCAAGAACTCACTGGAGTCCTATGCCTTCAACATGAAAGCAACTGTGGAAGATGAGAAACTTCAAGGC
AAGATCAATGATGAGGACAAACAGAAGATTCTTGACAAGTGCAATGAAATCATCAGCTGGCTGGATAAGA
ACCAGACTGCAGAGAAGGAAGAATTTGAGCATCAGCAGAAAGAACTGGAGAAAGTCTGCAACCCTATCAT
TACCAAGCTGTACCAGAGTGCAGGTGGCATGCCTGGGGGAATGCCTGGTGGCTTCCCAGGTGGAGGAGCT
CCCCCATCTGGTGGTGCTTCTTCAGGCCCCACCATTGAAGAGGTGGAT

ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
ACAAGGATGACGACGATAAGGTTTAA

Protein Sequence:

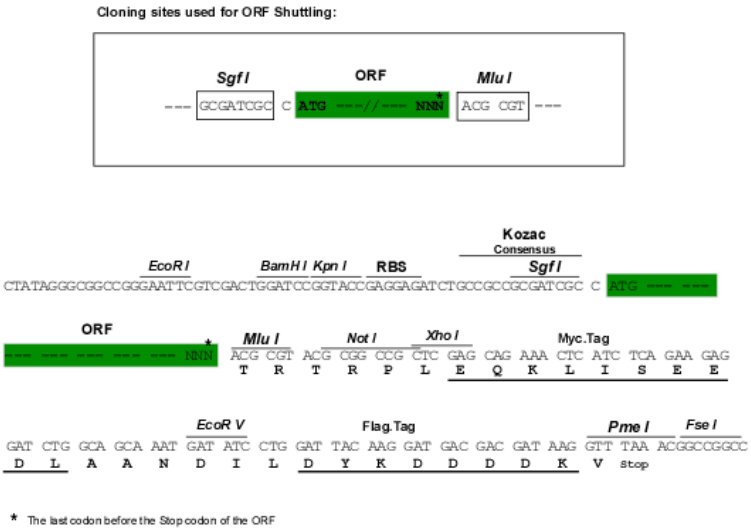
>MR209728 protein sequence
Red=Cloning site Green=Tags(s)

MSKGPAVGIDLGTTYSCVGVFQHGKVEIIANDQGNRTTPSYVAFTDTERLIGDAAKNQVAMNPTNTVFDA
KRLIGRRFDDAVVQSDMKHWPFMVVNDAGRPKVQVEYKGETKSFYPEEVSSMVLTKMKEIAEAYLGKTVT
NAVVTVPAYFNDSQRQATKDAGTIAGLNVLRIINEPTAAAIAYGLDKKVGAERNVLIFDLGGGTFDVSIL
TIEDGIFEVKSTAGDTHLGGEDFDNRMVNHFIAEFKRKHKKDISENKRAVRRLRTACERAKRTLSSSTQA
SIEIDSLYEGIDFYTSITRARFEELNADLFRGTLDPVEKALRDAKLDKSQIHDIVLVGGSTRIPKIQKLL
QDFFNGKELNKSINPDEAVAYGAAVQAAILSGDKSENVQDLLLLDVTPLSLGIETAGGVMTVLIKRNTTI
PTKQTQTFTTYSDNQPGVLIQVYEGERAMTKDNNLLGKFELTGIPPAPRGVPQIEVTFDIDANGILNVSA
VDKSTGKENKITITNDKGRLSKEDIERMVQEAEKYKAEDEKQRDKVSSKNSLESYAFNMKATVEDEKLQG
KINDEDKQKILDKCNEIISWLDKNQTAEKEEFEHQQKELEKVCNPIITKLYQSAGGMPGGMPGGFPGGGA
PPSGGASSGPTIEEVD

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Restriction Sites: SgfI-MluI

Cloning Scheme:



ACCN: BC085486

ORF Size: 1938 bp

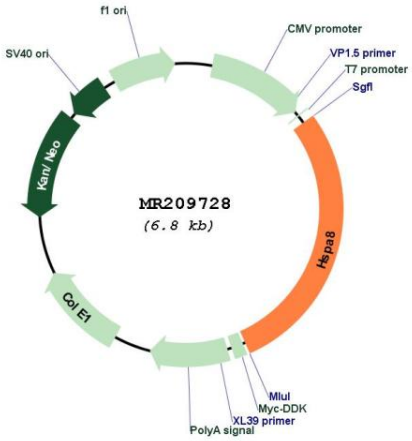
OTI Disclaimer: The molecular sequence of this clone aligns with the gene accession number as a point of reference only. However, individual transcript sequences of the same gene can differ through naturally occurring variations (e.g. polymorphisms), each with its own valid existence. This clone is substantially 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:	BC085486, AAH85486
RefSeq Size:	2129 bp
RefSeq ORF:	1940 bp
Locus ID:	15481
Cytogenetics:	9 21.55 cM
MW:	70.9 kDa
Gene Summary:	Molecular chaperone implicated in a wide variety of cellular processes, including protection of the proteome from stress, folding and transport of newly synthesized polypeptides, activation of proteolysis of misfolded proteins and the formation and dissociation of protein complexes. Plays a pivotal role in the protein quality control system, ensuring the correct folding of proteins, the re-folding of misfolded proteins and controlling the targeting of proteins for subsequent degradation. This is achieved through cycles of ATP binding, ATP hydrolysis and ADP release, mediated by co-chaperones. The co-chaperones have been shown to not only regulate different steps of the ATPase cycle of HSP70, but they also have an individual specificity such that one co-chaperone may promote folding of a substrate while another may promote degradation. The affinity of HSP70 for polypeptides is regulated by its nucleotide bound state. In the ATP-bound form, it has a low affinity for substrate proteins. However, upon hydrolysis of the ATP to ADP, it undergoes a conformational change that increases its affinity for substrate proteins. HSP70 goes through repeated cycles of ATP hydrolysis and nucleotide exchange, which permits cycles of substrate binding and release. The HSP70-associated co-chaperones are of three types: J-domain co-chaperones HSP40s (stimulate ATPase hydrolysis by HSP70), the nucleotide exchange factors (NEF) such as BAG1/2/3 (facilitate conversion of HSP70 from the ADP-bound to the ATP-bound state thereby promoting substrate release), and the TPR domain chaperones such as HOPX and STUB1. Acts as a repressor of transcriptional activation. Inhibits the transcriptional coactivator activity of CITED1 on Smad-mediated transcription. Component of the PRP19-CDC5L complex that forms an integral part of the spliceosome and is required for activating pre-mRNA splicing. May have a scaffolding role in the spliceosome assembly as it contacts all other components of the core complex. Binds bacterial lipopolysaccharide (LPS) and mediates LPS-induced inflammatory response, including TNF secretion. Participates in the ER-associated degradation (ERAD) quality control pathway in conjunction with J domain-containing co-chaperones and the E3 ligase STUB1.[UniProtKB/Swiss-Prot Function]

Product images:



Circular map for MR209728