

## Product datasheet for **MC203746**

### Hspa8 (NM\_031165) Mouse Untagged Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	Hspa8 (NM_031165) Mouse Untagged Clone
Tag:	Tag Free
Symbol:	Hspa8
Synonyms:	2410008N15Rik; Hsc70; Hsc71; Hsc73; Hsp73; Hspa10
Mammalian Cell Selection:	Neomycin
Vector:	PCMV6-Kan/Neo (PCMV6KN)
E. coli Selection:	Kanamycin (25 ug/mL)



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**Fully Sequenced ORF:** >BC006722  
 CCGACGCGTGGGCGGACACGTGGGCGGACGCGTGGGCGGAGGCGAGCTGCCGGCATTCTGTGGTCTCGT  
 CGTCAGCGCAGCTGGGCCTACACACAAGCAACCATGTCTAAGGGACCTGCAGTTGGCATTGATCTCGGCA  
 CCACCTACTCCTGTGTGGGTGCTTCCAGCATGGAAGGTGGAATATTGCCAATGACCAGGTAACCG  
 CACCACACCAAGCTATGTTGCTTCCAGGACACAGAGAGATTAATTGGGGATGCGGCCAAGAATCAGGTT  
 GCAATGAACCCCAACACAGATTTTTGATGCCAACGCTGATCGGGCGTAGGTTTGATGATGTTG  
 TTCAGTCTGATATGAAGCACTGGCCCTTCATGGTGGTGAATGATGCAGGCAGGCCAAGGTTCAAGTGGA  
 ATACAAAGGGGAGACAAAAGTTTCTACCCAGAGGAAGTGTCTCCATGGTTCTGACAAAGATGAAGGAA  
 ATTGCAGAAGCGTACCTCGGAAAGACTGTTACCAACGCTGTGGTCACAGTGCCCGCTTACTTCAATGACT  
 CTCAGCGACAGGCAACAAAAGATGCTGGAATATTGCTGGCCTCAATGTACTTCAATCATCAATGAACC  
 AACTGCTGCTGCTATTGCTTATGGCTTAGATAAGAAGGTCGGAGCTGAAAGGAATGTGCTCATTTTTGAC  
 TTGGGAGGTGGCACTTTTGTGTCAATCCTCACTATTGAGGATGGAATTTTTGAGGTCAAATCAACAG  
 CTGGAGACACCCACTTAGGTGGAGAAGATTTTGACAACCGAATGGTCAATCATTTATTGCTGAGTTCAA  
 GCGAAAGCACAAGAAAGACATCAGTGAGAACAAAGAGAGCTGCCCGCTCTCCGACGGCCTGCGAGCGG  
 GCCAAGCGCACCTCTCCTCCAGCACCCAGGCCAGTATTGAGATTGATTCTCTATGAGGGAATTGACT  
 TCTATACCTCCATTACCCGGGCTCGATTTGAGGAGTTGAATGCTGACCTGTTCCGTGGCACACTGGACCC  
 TGTAGAGAAGGCCCTTCGAGATGCCAAGCTGGACAAGTACAGATCCATGATATTGTCTTGGTGGTGGT  
 TCTACCAGAATCCCAAGATTGAGAACTTCTGCAAGACTTCTTCAATGGAAAAGAGCTGAACAAGAGCA  
 TTAACCCCGATGAAGCTGTTGCCATGGTGCAGCTGTCCAGGCAGCCATTCTATCTGGAGACAAGTCTGA  
 GAACGTTCAAGATTTGCTGCTCTGGATGTCACTCCTCTTTCCCTTGGTATTGAAACTGTGGCGGAGTC  
 ATGACTGTCCTCATCAAGCGCAATACCACCATCCCACCAAGCAGACACAGACTTTCACCACCTACTCTG  
 ACAACCAGCCTGGTGTACTCATTCAAGGTGATGAAGGTGAAAGGGCCATGACCAAGGACAACAACCTGCT  
 TGGAAAGTTCGAGCTCACAGGCATCCCTCCAGCACCCCGTGGGGTCCCTCAGATTGAGTTACTTTTGTGAC  
 ATCGATGCCAATGGCATCCTCAATGTTTCTGCTGTAGATAAGAGCACAGGAAAGGAGAACAAGATACCA  
 TCACCAATGACAAGGGCCGCTTGAGTAAGGAAGATATTGAGCGCATGGTCCAAGAAGCTGAGAAGTACAA  
 GGCTGAGGATGAGAAGCAGAGAGATAAGGTTTCTCCAAGAACTCACTGGAGTCTATGCCTTCAACATG  
 AAAGCAACTGTGGAAGATGAGAACTTCAAGGCAAGATCAATGATGAGGACAAACAGAAGATTCTTGACA  
 AGTGCAATGAAATCATCAGCTGGCTGGATAAGAACCAGACTGCAGAGAAGGAAGAATTTGAGCATCAGCA  
 GAAAGAAGTGGAGAAAGTCTGCAACCCTATCATTACCAAGCTGTACCAGAGTGCAGGTGGCATGCCTGGG  
 GGAATGCCTGGTGGCTTCCAGGTGGAGGAGCTCCCCATCTGGTGGTGTCTTTCAGGCCCCACCATTG  
 AAGAGGTGGATTAAGTCAGTCCAAGAAGAAGGTGTAGCTTTGTTCCACAGGGACCCAAAACAAGTAACAT  
 GGAATAATAAACTATTTAAATTGGCACCAAAAAAAAAAAAAAAAAAAAA

**Restriction Sites:** RsrII-NotI

**ACCN:** NM\_031165

**Insert Size:** 1941 bp

**OTI Disclaimer:** Our molecular clone sequence data has been matched to the reference identifier above as a point of reference. Note that the complete sequence of our molecular clones may differ from the sequence published for this corresponding reference, e.g., by representing an alternative RNA splicing form or single nucleotide polymorphism (SNP).

**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:** [BC006722](#), [AAH06722](#)

**RefSeq Size:** 2146 bp

**RefSeq ORF:** 1941 bp

**Locus ID:** 15481

**UniProt ID:** [P63017](#)

**Cytogenetics:** 9 21.55 cM

**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]