

## Product datasheet for **MR200324**

### Hspe1 (NM\_008303) Mouse Tagged ORF Clone

#### Product data:

**Product Type:** Expression Plasmids  
**Product Name:** Hspe1 (NM\_008303) Mouse Tagged ORF Clone  
**Tag:** Myc-DDK  
**Symbol:** Hspe1  
**Synonyms:** 10kDa; Hsp10; mt-cpn10  
**Mammalian Cell Selection:** Neomycin  
**Vector:** pCMV6-Entry (PS100001)  
**E. coli Selection:** Kanamycin (25 ug/mL)  
**ORF Nucleotide Sequence:** >MR200324 ORF sequence  
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**CGATCGCC**

ATGGCTGGACAAGCTTTTAGGAAGTTTCTTCCGCTCTTTGACAGAGTATTGGTTGAAAGGAGTGCTGCCG  
 AAAGTGTAAACAAAGGTGGCATTATGCTTCCAGAAAAGTCTCAAGGAAAAGTGTGCAAGCAACGGTCGT  
 GGCTGTGGGGTCAGGAGGGAAAGGAAAGAGTGAGAGATTGAGCCTGTCAGTGTGAAAGTTGGAGATAAA  
 GTTCTTCTCCAGAATATGGAGGCACAAAGTAGTTCTAGATGACAAGGATTATTTCTTATTAGAGATA  
 GTGACATTCTTGAAAGTATGTCGAC

**ACGCGT**ACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT  
 ACAAGGATGACGACGATAAGGTTTAA

**Protein Sequence:** >MR200324 protein sequence  
 Red=Cloning site Green=Tags(s)  
 MAGQAFRKFLPLFDRVLVERSAAETVTKGGIMLPEKSQGVQLQATVVAVGSGGKGSGEIEPVSVKVGDK  
 VLLPEYGGTKVLLDDKDYFLFRSDILGKYVD

**TR**TRPLEQKLISEEDLAANDILDYKDDDDKV

**Restriction Sites:** Sgfl-MluI



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**Cloning Scheme:**


**ACCN:** NM\_008303

**ORF Size:** 309 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:** [NM\\_008303.4](#)

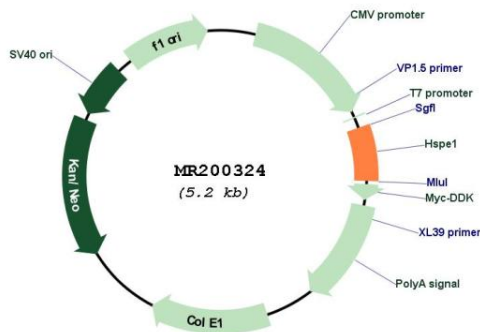
**RefSeq Size:** 788 bp

**RefSeq ORF:** 309 bp

**Locus ID:** 15528  
**UniProt ID:** [Q64433](#)  
**Cytogenetics:** 1 C1.2  
**MW:** 11 kDa

**Gene Summary:** Co-chaperonin implicated in mitochondrial protein import and macromolecular assembly. Together with Hsp60, 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]

**Product images:**



Circular map for MR200324