

## Product datasheet for **MC202686**

### Hspa5 (NM\_022310) Mouse Untagged Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	Hspa5 (NM_022310) Mouse Untagged Clone
Tag:	Tag Free
Symbol:	Hspa5
Synonyms:	AL022860; AU019543; baffled; Bip; D2Wsu17e; D2Wsu141e; Grp78; Hsce70; mBiP; SEZ-7; Sez7
Mammalian Cell Selection:	Neomycin
Vector:	PCMV6-Kan/Neo (PCMV6KN)
E. coli Selection:	Kanamycin (25 ug/mL)



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**Fully Sequenced ORF:** >BC050927 sequence for NM\_022310  
 GACCTGGACACTTGGGCTTCTGCGTGTGTGTGAGGTAAGCGCCGCGGCCTGCTGCTAGGCCTGCTCCGAG  
 TCTGCTTCGTGTCTCCTCCTGACCCCGAGGCCCTGTGCGCCTCAGACCAGAACCCTGCTGCGGTTTCGG  
 GGCCACAGCCTGTTGCTGGACTCCTAAGACTCCTGCTGACTGCTGAGCGACTGGTCTCAGCGCCGGCA  
 TGATGAAGTTCACTGTGGTGGCGCGCGTGTGCTGCTGGGCGCGGTGCGGGCCGAGGAGGAGGACAA  
 GAAGGAGGATGTGGGCACGGTGGTCGGCATCGACTTGGGACCACCTATTCCTGCGTGGTGTGTTCAAG  
 AACGGCCGCGTGGAGATCATAGCCAACGATCAGGGCAACCGCATCACGCCGTCGTATGTGGCCTTCACTC  
 CTGAAGGGGAGCGTCTGATTGGCGATGCGGCCAAGAACCAACTCACGTCCAACCCCGAGAACACGGTCTT  
 CGATGCCAAGCGCCTCATCGACGCACTTGAATGACCCTTCGGTGCAGCAGGACATCAAGTTCTTGCCA  
 TTCAAGGTGGTTGAAAAGAAAATAAACCGTACATTCAAGTTGATATTGGAGGTGGGCAAACCAAGACAT  
 TTGCCCCAGAAGAAATTTCTGCCATGGTTCTACTAAAATGAAGGAGACTGCTGAGGCGTATTTGGGAAA  
 GAAGGTTACCCATGCAGTTGTTACTGTACCAGCTTACTTCAATGATGCCAGCGACAAGCAACCAAGAT  
 GCTGGCACTATTGCTGGACTGAATGTCATGAGGATCATCAATGAGCCTACAGCAGCTGCTATTGCATATG  
 GCCTGGATAAGAGAGAGGGAGAGAAGAATCCTTGTGTTTGACCTGGGTGGCGGCACCTTCGATGTGTC  
 TCTTCTACCAATTGACAATGGTGTCTTTGAAGTGGTGGCCACTAATGGAGATACTCACCTGGGTGGGAA  
 GACTTTGATCAGCGGGTCAATGGAACACTTCATCAAGTTGTACAAAAGAAAAGTGGTAAAGATGTTAGGA  
 AAGACAACAGAGCTGTGCAGAACTCCGGCGTGAGGTAGAAAAGGCTAAGAGAGCCTTGTCTTCTCAGCA  
 TCAAGCAAGGATTGAAATTGAGTCTTCTCGAAGGAGAAGACTTCTCAGAGACCCTTACTCGGGCCAAA  
 TTTGAAGAGCTGAACATGGACCTGTTCCGCTCTACCATGAAGCCTGTCCAGAAAGTGTGGAAAGACTCTG  
 ATCTGAAGAAATCTGATATTGATGAAATGTTCTGTTGGTGGATCTACTCGAATTTCAAAGATTCAGCA  
 ACTGGTGAAAGAGTCTTCAATGGCAAGGAGCCATCCCGTGGCATAAACCCCGATGAGGCTGTAGCCTAT  
 GGTGCCGCTGTCCAGGCTGGTGTCTCTGTTGATCAGGATACAGGTGATCTGGTACTGCTTGTGTTT  
 GTCCCTTACACTTGGTATTGAAACTGTGGGAGGAGTCAAGCAAAAAGTATTCCAAGGAACACTGTGGT  
 ACCCACCAAGAAGTCTCAGATCTTCTCCACGGCTTCCGATAATCAGCCAAGTGAACAATCAAGGTCTAT  
 GAAGGTGAACGACCCCTAACAAAAGACAATCATCTTCTGGGTACATTTGATCTGACTGGAATTCCTCCTG  
 CTCCCGTGGAGTTCCCCAGATTGAAGTCACTTTTGGATAGATGTTAATGGTATTCTCCGAGTGACAGC  
 TGAAGACAAGGTACAGGAAACAAAACAAAATCACAAATTACCAATGACCAAAACCGCCTGACACCTGAA  
 GAAATTGAAAGGATGGTTAATGATGCTGAGAAGTTTGGTGGAGGACAAAAAGCTCAAAGAGCGCATTG  
 ACACCAGGAATGAATTGAAAGCTATGCTTATTCTCTCAAGAACCAGATTGGAGATAAAGAAAAGCTGGG  
 AGGTAAACTTTCTTGAAGATAAAGAAACCATGAAAAAGCTGTAGAGGAAAAGATTGAATGGCTGGAA  
 AGCCACCAGGATGCGGACATTGAAGACTTTAAAGCCAAAAGAAGGAAGTGAAGAAATTTTTCAGCCAA  
 TTATCAGCAAACCTATGGAAGTGGAGGCCCTCCCAACTGGTGAAGAGGATACATCAGAAAAAGATGA  
 GTTGTAGGTGCACTGATCTGCTAGAGCTGTAATATTGTAATACTGGACTCAGGAACCTTCGTTGGGAGA  
 AAATTGAGAGAACTTAAGTCTCGAATGTAATTGGAATCTTACCTCAGAGTGGAGTTGAAAATGCTATAG  
 CCCAAGTGGCTGTTTACTGCTTTTCAATAGCAGTTGCTCACATGTCTTGGGGTCAGGGAGAGGAGGAATT  
 GGCTATTTTAAAAATTGAGAAAAAGGTGGGTGAGGGTGTGTGTTACCTTGGATATGGTCTATTTAAACA  
 TTGGGTGATGCACATGTGGTGTAGGAACTTTTTCTACCAATAGTGACACCAATAAATGTTTGTATTTA  
 AAAAAAAAAAAAAAAAAA

**Restriction Sites:** Ascl-NotI  
**ACCN:** NM\_022310  
**Insert Size:** 1968 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](mailto: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](#)

**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:** [BC050927](#), [AAH50927](#)

**RefSeq Size:** 2537 bp

**RefSeq ORF:** 1968 bp

**Locus ID:** 14828

**UniProt ID:** [P20029](#)

**Cytogenetics:** 2 22.94 cM

**Gene Summary:**

Endoplasmic reticulum chaperone that plays a key role in protein folding and quality control in the endoplasmic reticulum lumen (PubMed:12411443, PubMed:12475965). Involved in the correct folding of proteins and degradation of misfolded proteins via its interaction with DNAJC10/ERdj5, probably to facilitate the release of DNAJC10/ERdj5 from its substrate (PubMed:12411443). Acts as a key repressor of the ERN1/IRE1-mediated unfolded protein response (UPR) (By similarity). In the unstressed endoplasmic reticulum, recruited by DNAJB9/ERdj4 to the luminal region of ERN1/IRE1, leading to disrupt the dimerization of ERN1/IRE1, thereby inactivating ERN1/IRE1 (By similarity). Accumulation of misfolded protein in the endoplasmic reticulum causes release of HSPA5/BiP from ERN1/IRE1, allowing homodimerization and subsequent activation of ERN1/IRE1 (By similarity). Plays an auxiliary role in post-translational transport of small presecretory proteins across endoplasmic reticulum (ER). May function as an allosteric modulator for SEC61 channel-forming translocon complex, likely cooperating with SEC62 to enable the productive insertion of these precursors into SEC61 channel. Appears to specifically regulate translocation of precursors having inhibitory residues in their mature region that weaken channel gating.[UniProtKB/Swiss-Prot Function]

Transcript Variant: This variant (2) differs in the 5' UTR compared to variant 1. Variants 1 and 2 encode the same protein. Sequence Note: This RefSeq record was created from transcript and genomic sequence data to make the sequence consistent with the reference genome assembly. The genomic coordinates used for the transcript record were based on transcript alignments.