

## Product datasheet for **MG221484**

### Hpse2 (NM\_001081257) Mouse Tagged ORF Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	Hpse2 (NM_001081257) Mouse Tagged ORF Clone
Tag:	TurboGFP
Symbol:	Hpse2
Synonyms:	Gm968; Hpa2
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)



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**ORF Nucleotide Sequence:**

>MG221484 representing NM\_001081257  
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**CGCATCGCC**

ATGAGGGTCTGTGCTTTCCCTGAAGCCATGGCTCCAGCAGCTCCCGCCCCCTCGTGCCTAGCCC  
 TGGTGGCTCTCTTGGCTCTGTTGCTCCATCTCCCTCTCCTTCCAGCTGGAAACAGGAGACCTTT  
 GCCTGTAGACAGAGCTACAGTTTGAAGGAAAAGACCCTGATTCTACTTGATGTGAGCACCAAGAACCCA  
 GTCAGGACAGTCAATGAGAACTTCTCTCTGACGCTGGATCCCTCCATCATTATGATGGCTGGCTCG  
 ATTTCTTAAGCTCCAAGCGTCTGGTACCTTGGCCGGGGACTCTCGCCCGCTTTCTGCGCTTCGGGGG  
 CAAAAGGACGGATTTCTGCAGTCCAGAACCTGAGAAATCCGGCGAAAAGCCGCGGGGGCCCGGGCCCG  
 GATTACTATCTCAAAAATATGAGGATGACATTGTCCGGAGTGATGTTGCCTTGGACAAGCAGAAAGGCT  
 GTAAGATTGCCAGCACCTGATGTCATGCTGGAGCTCCAGAGAGAGAAGGCATCGCAGATGCATCTGGT  
 TCTTCTGAAGGAGCAATACTCCAATACTACAGTAACCTCATATTAACAGCCAGGTCTCTAGACAACTT  
 TATAACTTTGCTGATTGCTCTGGACTCCACCTGATATTTGCTCTAAATGCACTGCGTCGTAATCCCAATA  
 ACTCCTGGAACAGTTCTAGTGCCCTGAGCCTGTTGAAGTACAGTGCCAGCAAAAAGTACAACATTTCTTG  
 GAACTGGGAATGAGCCAAATAACTATCGGAGCATCCATGGCCGGGCAGTAAATGGTAGCCAGTTGGGA  
 AAGGATTACATCCAGCTGAAGAGCCTGCTCAACCCATCCGGGTTTACTCCAGAGCCAGCCTGTACGGCC  
 CCAACATCGGACGGCCAGGAAGAAGCTCATTGCTCTCCTAGATGGATTCATGAAGGTGGCAGGAAGCAC  
 AGTGGATGCGGTTACCTGGCAACATTGCTACATTGATGGCCGGTGGTCAAGGTGATGGACTTCTGAAA  
 ACTCGTCTGTTAGATACACTCTGACCAGATTAGGAAAATTCAGAAAAGTGGTCAACACATACACTCCAG  
 GAAAGAAGATTTGGCTGGAAGGCGTGGTACCACCTCAGCTGGAGGCACAAAACATCTGCGGATTCCTA  
 CGCTGCAGGATCTTATGGCTAAACACTTTAGGAATGTTGGCCAATCAGGGCATTGATGTCGTGATACGA  
 CATTCAATTTTTCGACCACGGATACAACCATCTGGTGGACCAGAATTTTAAACCATTACCAGACTATTGGC  
 TTTCTCTGCTTTACAAGCGTCTGATTGGCCCCAAGTCTGCGAGTGCATGTAGCTGGGCTCCAGCGGAA  
 GCCTCGGCCAGGAAGAGTCATCCGAGACAACTAAGAATCTATGCTCACTGCACAAACCACCACAACCAC  
 AACTATGTCGGTGGCTCTATCACACTTTTCATCATCAACCTACATCGATCAAGAAAGAAAATCAAAGTGG  
 CTGGGACTCTGAGGGACAAGCTCGTGCACCAGTATCTGCTGCAGCCCTATGGGCAGGAAGGCTAAAGTC  
 CAAGTCAGTGCAGCTCAATGGCCAGCCCTTAGTGATGGTGGACGACGGGACCCTTCCAGAAGTGAAGCCC  
 CGCCCGCTGCGGGCCGGCCGGACATTGGTATCCCTCCAGTACCATGGGCTTTTATGTGGTCAAGAATG  
 TCAATGCTTTGGCTGCCGTTATCGA

**ACGCGT**ACGCGGCCGCTCGAG – GFP Tag – GTTTAA

**Protein Sequence:**

>MG221484 representing NM\_001081257  
 Red=Cloning site Green=Tags(s)

MRVLCAPPEAMASSSRPPSCLALVALFLALLLHLSLFSHAGNRRPLPVDRATGLKEKTLILLDVSTKNP  
 VRTVNFENFLSLQLDPSIIHDGWLDLSSKRLVTLARGLSPAFLRFGGKRTDFLQFQNLNPAKSRGGPGP  
 DYYLKNYEDDIVRSDVALDKQKQCKIAQHPDVMLELQREKASQMHLLVLLKEQYSNTYSNLILTARSLDKL  
 YNFADCSGLHLIFALNALRRNPNSWNSSSALSLLKYSASKKYNISWELGNEPNNYRSIHGRAVNGSQLG  
 KDYIQLKSLQLQIRVYSRASLYGPNIGRPRKNVIALLDGFMKVAGSTVDAVTWQHICYIDGRVVKVMDFLK  
 TRLLDTLSDQIRKIQKVNTYTPGKKIWLQEVVTTAGGTTNLSDSYAAGFLWLNLTGMLANQIDVVIR  
 HSFFDHGYNHLVDQNFNPLPDYWL SLLYKRLIGPKVLAVHVAGLQRKPRGRVIRDKLRIYAHCTNHHNH  
 NYVRGSITLFIINLHRSRKKIKLAGTLRDKLVHQYLLQPYGQEGLKSKSVQLNGQPLVMVDDGTLPELKP  
 RPLRAGRTLVIIPVMTMGFYVVKVNVNALACRYR

**TRTRPLE** – GFP Tag – V

**Restriction Sites:**

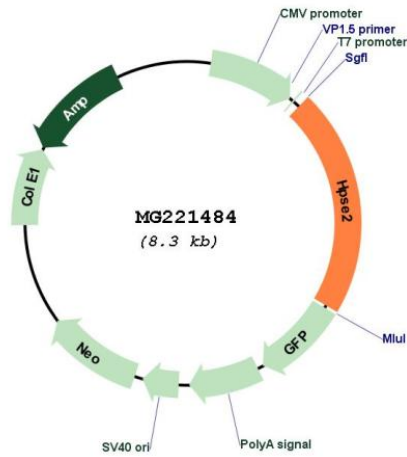
SgfI-MluI

Cloning Scheme:

Cloning sites used for ORF Shuttling:



Plasmid Map:



ACCN: NM\_001081257

ORF Size: 1776 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](#)

**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\\_001081257.2](#), [NP\\_001074726.1](#)

**RefSeq Size:** 2131 bp

**RefSeq ORF:** 1779 bp

**Locus ID:** 545291

**UniProt ID:** [B2RY83](#)

**Cytogenetics:** 19 C3

**Gene Summary:** Binds heparin and heparan sulfate with high affinity, but lacks heparanase activity. Inhibits HPSE, possibly by competing for its substrates (in vitro) (By similarity).[UniProtKB/Swiss-Prot Function]