

Product datasheet for **MG205366**

Hmces (NM_173737) Mouse Tagged ORF Clone

Product data:

Product Type: Expression Plasmids
Product Name: Hmces (NM_173737) Mouse Tagged ORF Clone
Tag: TurboGFP
Symbol: Hmces
Synonyms: 8430410A17Rik; C85376
Mammalian Cell Selection: Neomycin
Vector: pCMV6-AC-GFP (PS100010)
E. coli Selection: Ampicillin (100 ug/mL)
ORF Nucleotide Sequence: >MG205366 representing NM_173737
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGATCGCC**

ATGTGCGGGCGAACGTCCTGTCACCTTGCCAGAGAGGTTCTCACCAGGGCTGCGCCTATCAGGATCGGC
 AGGGCCGGCGGGCTCCCGCAGTGGAGGGACCCGACAAGTACTGCCCTCCTACAACAAGAGCCCGCA
 GTCCAGCAGCCCCGTGCTGCTCAGACTGCACTTTGAGAAGGATGCAGACTCATCAGATCGGATAATT
 ATCCCATGCGATGGGGCTTAGTCCCATCTTGGTTCAAAGAAAGTGATCCTTCTAAGCTGCAGTTCAACA
 CTACCAACTGTCGTAGTATACCATAATGGAGAAGCAGTCATTCAAGTTCTCTGGGAAAGGACGGCG
 GTGTGTTGTTTTAGCAGATGGATTCTACGAGTGGCAGCGGTGTCAGGGAACAAACCAGAGGCAACCATAC
 TTCATCTATTTTCTCAAATCAAGACAGAGAAGTCAGGTGGGAACGATGCTTCAGACAGCTCTGACAACA
 AGGAAAAGGTCTGGGACAACCTGGAGGCTGCTGACAATGGCAGGGATCTTTGACTGCTGGGAAGCGCCAGG
 GGGAGAGTGCCTGTATTCTACAGCATCATCACTGTGGATTCTGCAGAGGTTTGTAGTGACATCCACAGC
 AGGATGCCTGCCATACTAGATGGAGAAGAAGCAGTCTCCAATGGCTCGACTTTGGTGAGGTGCGCCACTC
 AGGAAGCTCTGAAGCTAATCCACCCCATAGACAATATCACCTCCATCCAGTTTCTCCAGTGGTGAACAA
 TTCCCAGAAACAACACTCCGGAGTGTCTGGCGCTGCTGACTTGTGTTAAGAAGGAGCCCAAGGCAAA
 GGCAGAGTCAAAGGATGATGCAGTGGCTGGCTACAAAGTCAACCAAGGAAGTCCCTGACTCACCCA
 AAAAGGATGCATCAGGTCTACCCAGTGGTCCAGCCAGTTTCTCCAGAAGAGCCCATGCTGCTAAAAG
 AGGTGCTACCAGCAGCTTCTGGATCGATGGCTGAAGCAGGAGAAGGAGGATGAGCCCATGGCCAAGAAG
 CCTAACAGC

ACGCGTACGCGGCCGCTCGAG - GFP Tag - GTTTAA



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Protein Sequence: >MG205366 representing NM_173737
 Red=Cloning site Green=Tags(s)

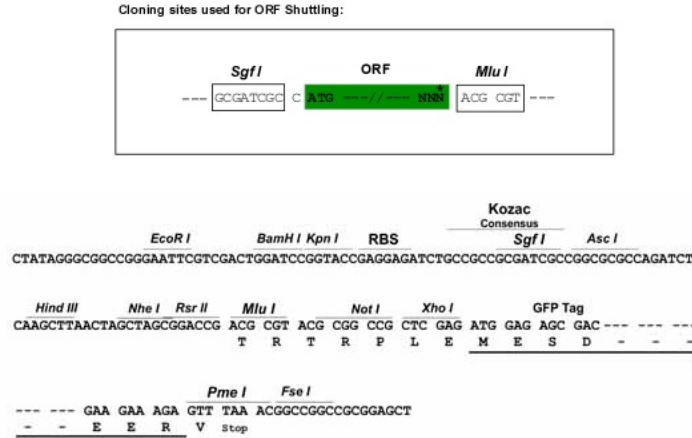
MCGRTSCHLPREVLTRACAYQDRQGRRRLPQWRDPDKYCPSYNKSPQSSSPVLLSRLHFEKADADSSDRII
 IPMRWGLVPSWFKESDPKSLQFNNTNCRSDTIMEKQSFVKVPLGKGRRCVVLADGFYEWQRCQGTNQRQPY
 FIYFPQIKTEKSGGNADSSDNKEKVWDNWRLLTMAGIFDCWEAPGGECLYSYSIITVDSCRGLSDIHS
 RMPAILDGEAEVSKWLDGGEVATQEALKLIHPIDNITFHPVSPVVNNSRNNTPECLAPADLLVKKEPKAN
 GSSQRMQWLATKSPKKEVPDSPKDKASGLPQWSSQFLQKSPLPAKRATSSFLDRWLKQKEDEPMMAK
 PNS

TRTRPLE - GFP Tag - V

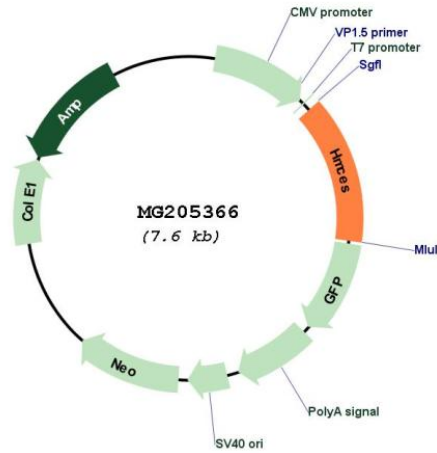
Restriction Sites:

SgfI-MluI

Cloning Scheme:



Plasmid Map:



ACCN:

NM_173737

ORF Size:	1059 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:	<ol style="list-style-type: none">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_173737.2 , NP_776098.1
RefSeq Size:	1422 bp
RefSeq ORF:	1062 bp
Locus ID:	232210
UniProt ID:	Q8R1M0
Cytogenetics:	6 D1
Gene Summary:	Sensor of abasic sites in single-stranded DNA (ssDNA) required to preserve genome integrity by promoting error-free repair of abasic sites (By similarity). Acts as an enzyme that recognizes and binds abasic sites in ssDNA at replication forks and chemically modifies the lesion by forming a covalent cross-link with DNA (By similarity). The HMCES DNA-protein cross-link is then degraded by the proteasome (By similarity). Promotes error-free repair of abasic sites by acting as a 'suicide' enzyme that is degraded, thereby protecting abasic sites from translesion synthesis (TLS) polymerases and endonucleases that are error-prone and would generate mutations and double-strand breaks (By similarity). Acts as a protease: mediates autocatalytic processing of its N-terminal methionine in order to expose the catalytic cysteine (PubMed:29020633). Specifically binds 5-hydroxymethylcytosine (5hmC)-containing DNA in stem cells (PubMed:23434322). May act as an endonuclease that specifically cleaves 5hmC-containing DNA; additional experiments are however required to confirm this activity in vivo (PubMed:29020633).[UniProtKB/Swiss-Prot Function]