

## Product datasheet for MR205366

### Hmces (NM\_173737) Mouse Tagged ORF Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	Hmces (NM_173737) Mouse Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	Hmces
Synonyms:	8430410A17Rik; C85376
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
ORF Nucleotide Sequence:	>MR205366 ORF sequence Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
GCC**CGATCGCC**

ATGTGCGGGCGAACGTCCTGTCACCTTGCCAGAGAGGTTCTCACCAGGGCCTGCGCCTATCAGGATCGGC  
AGGGCCGGCGCGGCTCCCGCAGTGGAGGGACCCGACAAGTACTGCCCTCCTACAACAAGAGCCCGCA  
GTCCAGCAGCCCCGTGCTGCTCTCCAGACTGCACCTTTGAGAAGGATGCAGACTCATCAGATCGGATAATT  
ATCCCATGCGATGGGGCTTAGTCCCATCTTGGTTCAAAGAAAGTGATCCTTCTAAGCTGCAGTTCAACA  
CTACCAACTGTCGTAGTATACCATAATGGAGAAGCAGTCATTCAAGTTCTCTGGGAAAGGACGGCG  
GTGTGTTGTTTTAGCAGATGGATTCTACGAGTGGCAGCGGTGTCAGGGAACAAACCAGAGGCAACCATAC  
TTCATCTATTTTCTCAAATCAAGACAGAGAAGTCAGGTGGGAACGATGCTTCAGACAGCTCTGACAACA  
AGGAAAAGGTCTGGGACAACCTGGAGGCTGCTGACAATGGCAGGGATCTTTGACTGCTGGGAAGCGCCAGG  
GGGAGAGTGCCTGTATTCTACAGCATCATCACTGTGGATTCTGCAGAGGTTTGAGTGACATCCACAGC  
AGGATGCCTGCCATACTAGATGGAGAAGAAGCAGTCTCCAATGGCTCGACTTTGGTGAGGTGCGCCACTC  
AGGAAGCTCTGAAGCTAATCCACCCATAGACAATATCACCTCCATCCAGTTTCTCCAGTGGTGAACAA  
TTCCCGAAACAACACTCCGGAGTGTCTGGCGCTGCTGACTTCTGTTAAGAAGGAGCCCAAGGCAAA  
GGCAGAGTCAAAGGATGATGCAGTGGCTGGCTACAAAGTCAACCAAAAAGGAAGTCCCTGACTCACCCA  
AAAAGGATGCATCAGGTCTACCCAGTGGTCCAGCCAGTTTCTCCAGAAGAGCCCATGGCTGCTAAAAG  
AGGTGCTACCAGCAGCTTCTGGATCGATGGCTGAAGCAGGAGAAGGAGGATGAGCCCATGGCCAAGAAG  
CCTAACAGC

**ACGCGT**ACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAATGATATCCTGGATT  
ACAAGGATGACGACGATAAGGTTTAA



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**Protein Sequence:** >MR205366 protein sequence  
Red=Cloning site Green=Tags(s)

MCGRTSCHLPREVLTRACAYQDRQRRRLPQWRDPKYCPSYNKSPQSSSPVLLSRLHFEKDADSSDRII  
 IPMRWGLVPSWFKESDPKSLQFNNTNCRSDTIMEKQSFVPLGKGRRCVVLADGFYEWQRCQGTNQRQPY  
 FIYFPQIKTEKSGGNDASDSSDNKEKVWLNWRLTMAGIFDCWEAPGGECLYSYSIITVDSRGLSDIHS  
 RMPAILDGEEAVSKWLDGFEVATQEALKLIHPIDNITFHPVSPVVNNSRNNTPECLAPADLLVKKEPKAN  
 GSSQRMMQWLATKSPKKEVPDSPKKDASGLPQWSSQFLQKSPLPAKRGATSSFLDRWLKQEKEDPMAKK  
 PNS

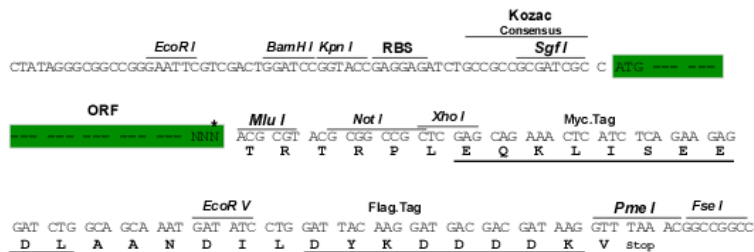
TRTRPLEQKLISEEDLAANDILDYKDDDDKV

**Restriction Sites:**

SgfI-MluI

**Cloning Scheme:**

Cloning sites used for ORF Shuttling:



\* The last codon before the Stop codon of the ORF

**ACCN:** NM\_173737

**ORF Size:** 1062 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\\_173737.2](#), [NP\\_776098.1](#)

**RefSeq Size:** 1422 bp

**RefSeq ORF:** 1062 bp

**Locus ID:** 232210

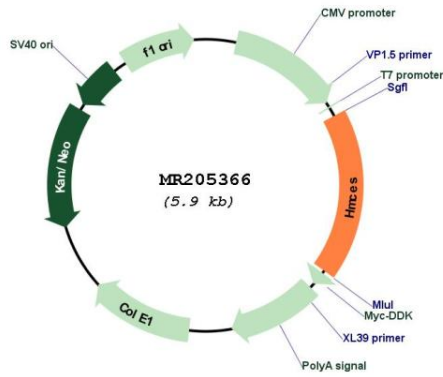
**UniProt ID:** [Q8R1M0](#)

**Cytogenetics:** 6 D1

**MW:** 40.2 kDa

**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]

Product images:



Circular map for MR205366