

## Product datasheet for **RN207066**

### Hmces (NM\_001025047) Rat Untagged Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	Hmces (NM_001025047) Rat Untagged Clone
Tag:	Tag Free
Symbol:	Hmces
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
Fully Sequenced ORF:	>RN207066 representing NM_001025047 Red=Cloning site Blue=ORF Orange=Stop codon

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
GCC**CGATCGCC**

ATGTGCGGGCGAACGTCCTGTCACCTTGCCTAGAGATGCTCTCACTAGAGCCTGTGCCTATCTGGATCGGC  
AGGGCAGGCGTCAGTCCCAGTGGAGGGACCCTGATAAGTACTGCCCTCCTACAACAAGAGCCCGCA  
GTCTAGCAGCCCAGTGTCTCTCCAGACTGCACTTTGAAAAGGATGCAGATTCATCAGATCGGATAATT  
TTTCCCATGCGATGGGGCTTAGTCCCATCTTGGTTCAAAGAAAGTGATCCTTCCAAGCTGCAGTTCAACA  
CTTCCAAGTCCCGTAGTGATACCAATGGAGAAGCAGTCGTTCAAGGCTCCTCTGGGAAAGGACGGCG  
GTGTGTTGTCTTAGCAGATGGATTCTACGAGTGGCAGCGATGTCAGGGAACAAACCAGAGCCGCTAC  
TTCATCTATTTTCCTCAAAGCAAAACAGAGAAGTCAGGTGAGAACAGTGGTTTCAGACAGCCTTAACAACA  
AGGAAGAGGTCTGGGACAACTGGAGGCTGCTGACAATGGCAGGGATCTTTGACTGTTGGGAACCCCAAA  
GGGAGAGCGCCTGTATTCTACAGCATCACTGTGGATTCCTGCAGAGGTCTGAGTGACATCCACAGC  
AGGATGCCTGCCATACTGGATGGAGAAGAGGCGGTCTCCAATGGCTTGACTTTGGTGAGGTCTCTACTC  
AGGAAGCTCTGAAGCTAATCCACCCATAGATAACATCACCTCCATCCAGTTTCTCCAGTGGTGAACAA  
TTCCCGAAACAACACTCCTGAGTGTCTGGCTCCTGCTGACTTGCTGGTTAAGAAGGAGCCCAAGGCAAGT  
GGCAGTAGTCAAAGGATGATGCAATGGCTGGCTACAAAGTCACCCAAAAGGAAGTCCCTGACTCACCCA  
AAAAGGATGCATCAGGTCTACCCAGTGGTCCAGCCAGTTTCTACAGAAGAGCCATTGCCGACTAAAAG  
AGGTGCCAGCAGCAGCCTCCTGGATCGATGGCTGAAGCAGGAGAAGGAGGATGAGCCTGTGGCCAAGAGG  
CCAAACAGCTAG

**ACGCGT**ACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT  
ACAAGGATGACGACGATAAGGTTTAA

Chromatograms: [https://cdn.origene.com/chromatograms/ja3058\\_f11.zip](https://cdn.origene.com/chromatograms/ja3058_f11.zip)

Restriction Sites: Sgfl-Mlul



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<b>ACCN:</b>	NM_001025047
<b>Insert Size:</b>	1062 bp
<b>OTI Disclaimer:</b>	<p>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 <a href="mailto:custsupport@origene.com">custsupport@origene.com</a> or by calling 301.340.3188 option 3 for pricing and delivery.</p> <p>Our molecular clone sequence data has been matched to the reference identifier above as a point of reference. Note that the complete sequence of our molecular clones may differ from the sequence published for this corresponding reference, e.g., by representing an alternative RNA splicing form or single nucleotide polymorphism (SNP).</p>
<b>Components:</b>	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).
<b>Reconstitution Method:</b>	<ol style="list-style-type: none"> <li>1. Centrifuge at 5,000xg for 5min.</li> <li>2. Carefully open the tube and add 100ul of sterile water to dissolve the DNA.</li> <li>3. Close the tube and incubate for 10 minutes at room temperature.</li> <li>4. Briefly vortex the tube and then do a quick spin (less than 5000xg) to concentrate the liquid at the bottom.</li> <li>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.</li> </ol>
<b>RefSeq:</b>	<u>NM_001025047.1, NP_001020218.1</u>
<b>RefSeq Size:</b>	1486 bp
<b>RefSeq ORF:</b>	1062 bp
<b>Locus ID:</b>	500251
<b>UniProt ID:</b>	<u>Q5XIJ1</u>
<b>Cytogenetics:</b>	4q34

**Gene Summary:**

Sensor of abasic sites in single-stranded DNA (ssDNA) required to preserve genome integrity by promoting error-free repair of abasic sites. 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. The HMCEs DNA-protein cross-link is then degraded by the proteasome. 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. Specifically binds 5-hydroxymethylcytosine (5hmC)-containing DNA in stem cells. May act as an endonuclease that specifically cleaves 5hmC-containing DNA; additional experiments are however required to confirm this activity in vivo (By similarity).[UniProtKB/Swiss-Prot Function]