

## Product datasheet for **RC218073**

### NSMCE1 (NM\_145080) Human Tagged ORF Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	NSMCE1 (NM_145080) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	NSMCE1
Synonyms:	NSE1
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
ORF Nucleotide Sequence:	>RC218073 representing NM_145080 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
GCC**CGGATCGCC**

ATGCAGGGCAGCACAAAGGAGAAATGGGCGTCATGACTGATGTCCACCGGCGCTTCTCCAGTTGCTGATGA  
CCCATGGCGTGTAGAGGAATGGGACGTGAAGCGCTTGCAGACGCACTGCTACAAGGTCCATGACCGCAA  
TGCCACCGTAGATAAGTTGGAGGACTTCATCAACAACATTAACAGTGTCTTGGAGTCCTTGATATTGAG  
ATAAAGAGAGGAGTACGGAAGATGATGGGAGACCCATTTATGCGTTGGTGAATCTTGCTACAACCTCAA  
TTTCCAAAATGGCTACGGATTTTGCAGAGAATGAACTGGATTTGTTAGAAAGGCTCTGGAAGTATTAT  
TGACTCAGAAACCGGCTTTGCGTCTCCACAAACATATTGAACCTGGTTGATCAACTTAAAGGCAAGAAG  
ATGAGGAAGAAGGAAGCGGAGCAGGTGCTGCAGAAGTTTGTTCAAAACAAGTGGCTGATTGAGAAGGAAG  
GGGAGTTCACCCTGCACGGCCGGCCATCCTGGAGATGGAACAATACATCCGGGAGACGTACCCCGACGC  
GGTGAAGATCTGCAATATCTGTACAGCCTCCTCATCCAGGGTCAAAGCTGCGAAACCTGTGGGATCAGG  
ATGCACTTACCCTGCGTGGCCAAGTACTTCCAGTGAATGCTGAACCGCGCTGCCCCACTGCAACGACT  
ACTGGCCCCACGAGATCCAAAAGTCTTCGACCCTGAGAAGGAGAGGGAGTCTGGTGTCTTGAATCGAA  
CAAAAAGTCCCTGCGGTCCAGGCAGCAT

**ACGCGT**ACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT  
ACAAGGATGACGACGATAAGGTTTAA



**Protein Sequence:** >RC218073 representing NM\_145080  
Red=Cloning site Green=Tags(s)

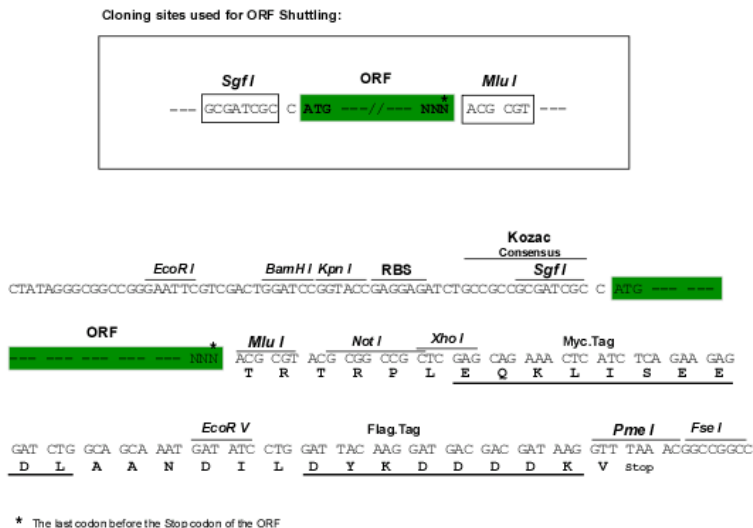
MQGSTRRMGMVMTDVHRRFLQLLMTHGVLEEWDVKRLQTHCYKVHDRNATVDKLEDFINNINSVLESLEYIE  
 IKRGVTEDDGRPIYALVNLATTSISKMATDFAENELDLFRKALELIIDSETGFASSTNILNLVDQLKGKK  
 MRKKEAEQVLQKFVQNKWLEKEGEFTLHGRAILEMEQYIREYTPDAVKICNICHSLLIQQSCETCGIR  
 MHLPCVAKYFQSNAEPRCPHCNDYWPHEIPKVFDPekerESGVLKSNKSLRSRQH

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

**Chromatograms:** [https://cdn.origene.com/chromatograms/mk6480\\_g06.zip](https://cdn.origene.com/chromatograms/mk6480_g06.zip)

**Restriction Sites:** SgfI-MluI

**Cloning Scheme:**



**ACCN:** NM\_145080

**ORF Size:** 798 bp

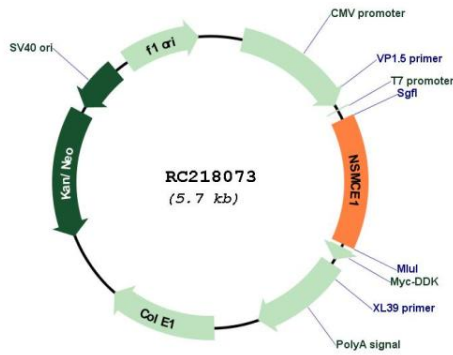
**OTI Disclaimer:** The molecular sequence of this clone aligns with the gene accession number as a point of reference only. However, individual transcript sequences of the same gene can differ through naturally occurring variations (e.g. polymorphisms), each with its own valid existence. This clone 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.

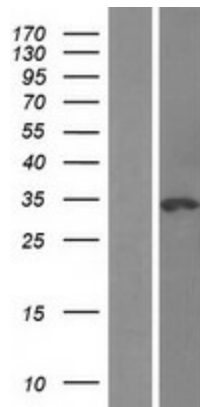
**Components:** The ORF clone is ion-exchange column purified and shipped in a 2D barcoded Matrix tube containing 10ug of transfection-ready, dried plasmid DNA (reconstitute with 100 ul of water).

<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>	<a href="#">NM_145080.3</a> , <a href="#">NP_659547.2</a>
<b>RefSeq Size:</b>	1079 bp
<b>RefSeq ORF:</b>	801 bp
<b>Locus ID:</b>	197370
<b>UniProt ID:</b>	<a href="#">Q8WV22</a>
<b>Cytogenetics:</b>	16p12.1
<b>Protein Families:</b>	Druggable Genome
<b>MW:</b>	30.7 kDa
<b>Gene Summary:</b>	<p>RING-type zinc finger-containing E3 ubiquitin ligase that assembles with melanoma antigen protein (MAGE) to catalyze the direct transfer of ubiquitin from E2 ubiquitin-conjugating enzyme to a specific substrate. Within MAGE-RING ubiquitin ligase complex, MAGE stimulates and specifies ubiquitin ligase activity likely through recruitment and/or stabilization of the E2 ubiquitin-conjugating enzyme at the E3:substrate complex. Involved in maintenance of genome integrity, DNA damage response and DNA repair (PubMed:29225034, PubMed:20864041). NSMCE3/MAGEG1 and NSMCE1 ubiquitin ligase are components of SMC5-SMC6 complex and may positively regulate homologous recombination-mediated DNA repair (PubMed:18086888). MAGEF1-NSMCE1 ubiquitin ligase promotes proteasomal degradation of MMS19, a key component of the cytosolic iron-sulfur protein assembly (CIA) machinery. Down-regulation of MMS19 impairs the activity of several DNA repair and metabolism enzymes such as ERCC2/XPD, FANCI, RTEL1 and POLD1 that require iron-sulfur clusters as cofactors (PubMed:29225034).[UniProtKB/Swiss-Prot Function]</p>

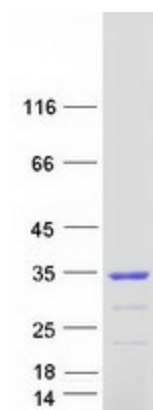
Product images:



Circular map for RC218073



Western blot validation of overexpression lysate (Cat# [LY408050]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC218073 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).



Coomassie blue staining of purified NSMCE1 protein (Cat# [TP318073]). The protein was produced from HEK293T cells transfected with NSMCE1 cDNA clone (Cat# RC218073) using MegaTran 2.0 (Cat# [TT210002]).