OriGene Technologies, Inc.
9620 Medical Center Drive, Ste 200
Rockville, MD 20850, US
Phone: +1-888-267-4436
https://www.origene.com
techsupport@origene.com
EU: info-de@origene.com
CN: techsupport@origene.cn

Product datasheet for RC207639

NSE2 (NSMCE2) (NM_173685) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	NSE2 (NSMCE2) (NM_173685) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	NSE2
Synonyms:	C8orf36; MMS21; NSE2; ZMIZ7
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)

ORF Nucleotide Sequence:

>RC207639 ORF sequence
Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCCGCGATCGCC

ATGCCAGGACGTTCCAGTTCAAATTCAGGTTCAACTGGTTTCATCTCCTTCAGTGGTGTAGAGTCTGCTC
TCTCCTCCTTGAAAAACTTCCAAGCCTGTATCAACTCTGGTATGGACACAGCTTCTAGTGTTGCTTTGGA
TCTTGTGGAAAGTCAGACTGAAGTGAGTAGTGAATATAGTATGGACAAGGCAATGGTTGAATTTGCTACA
TTGGATCGGCAACTAAACCATTATGTAAAGGCTGTTCAATCTACAATAAATCATGTGAAAGAAGAACGTC
CAGAAAAAATACCAGATTTAAAATTATTGGTAGAGAAGAAATTTTTGGCTTTACAGAGCAAGAATTCTGA
TGCAGACTTTCAAAATAATGAAAAATTTGTACAGTTTAAACAACAGCTGAAAGAACTAAAGAAGCAATGT
GGTCTTCAAGCTGACAGAGAAGCTGACGGAACAGAAGGAGTGGATGAAGATATAATTGTGACCCAAAGTC
AGACCAACTTCACCTGCCCCATTACAAAGGAGGAAATGAAGAAGCCAGTGAAAAATAAAGTGTGTGGCCA
CACCTATGAAGAGGACGCCATTGTTCGCATGATTGAGTCCAGGCAAAAGCGGAAGAAAAAGGCCTATTGC
CCTCAAATTGGCTGTAGCCACACGGATATAAGAAAGTCAGATCTTATCCAGGATGAAGCACTTAGAAGGG
CAATTGAGAACCATAACAAGAAAAGACATCGTCATTCCGAG

ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
ACAAGGATGACGACGATAAGGTTTAA

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Protein Sequence:

>RC207639 protein sequence
Red=Cloning site Green=Tags(s)

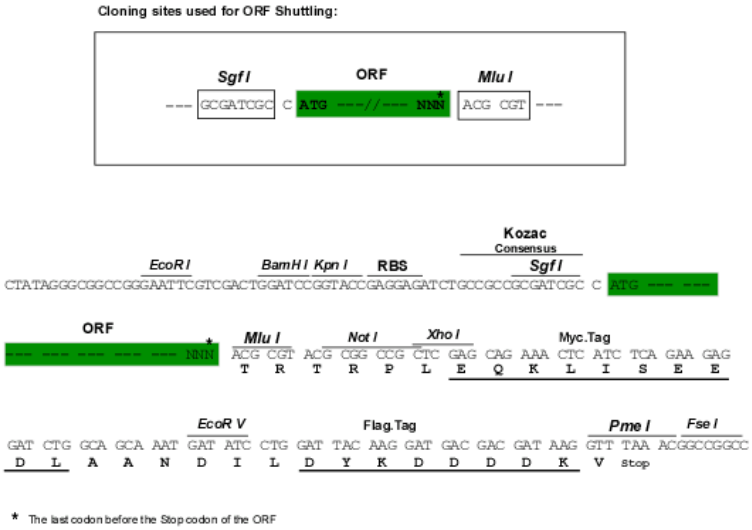
MPGRSSSNSGSTGFISFSGVESALSSLKNFQACINSGMDTASSVALDLVESQTEVSSEYSMDKAMVEFAT
LDRQLNHYVKAVQSTINHVKEERPEKIPDLKLLVEKKFLALQSKNSDADFQNNEKFVQFKQQLKELKKQC
GLQADREADGTEGVDEDIIVTQSQTNFTCPITKEEMKKPVKNKVCGHTYEEDAIVRMIESRQKRKKKAYC
PQIGCSHTDIRKSDLIQDEALRRAIENHNKKRHRHSE

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Chromatograms: https://cdn.origene.com/chromatograms/mk6335_b03.zip

Restriction Sites: SgfI-MluI

Cloning Scheme:



ACCN: NM_173685

ORF Size: 741 bp

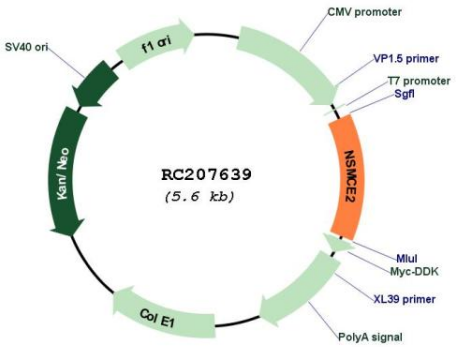
OTI Disclaimer: Due to the inherent nature of this plasmid, standard methods to replicate additional amounts of DNA in E. coli are highly likely to result in mutations and/or rearrangements. Therefore, OriGene does not guarantee the capability to replicate this plasmid DNA. Additional amounts of DNA 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 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

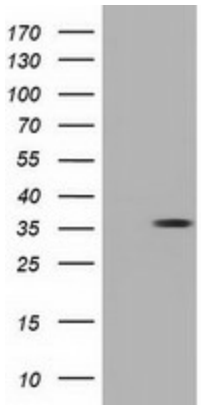
OTI Annotation: This clone was engineered to express the complete ORF with an expression tag. Expression varies depending on the nature of the gene.

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.
Note:	Plasmids are not sterile. For experiments where strict sterility is required, filtration with 0.22um filter is required.
RefSeq:	NM_173685.4
RefSeq Size:	1225 bp
RefSeq ORF:	744 bp
Locus ID:	286053
UniProt ID:	Q96MF7
Cytogenetics:	8q24.13
MW:	27.9 kDa
Gene Summary:	This gene encodes a member of a family of E3 small ubiquitin-related modifier (SUMO) ligases that mediates the attachment of a SUMO protein to proteins involved in nuclear transport, transcription, chromosome segregation and DNA repair. The encoded protein is part of the structural maintenance of chromosomes (SMC) 5/6 complex which plays a key role genome maintenance, facilitating chromosome segregation and suppressing mitotic recombination. A knockout of the orthologous mouse gene is lethal prior to embryonic day 10.5. Naturally occurring mutations in this gene, that abolish the SUMO ligase activity, are associated with primordial dwarfism and extreme insulin resistance. [provided by RefSeq, Mar 2017]

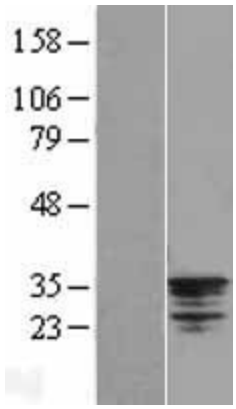
Product images:



Circular map for RC207639



HEK293T cells were transfected with the pCMV6-ENTRY control (Cat# [PS100001], Left lane) or pCMV6-ENTRY NSMCE2 (Cat# RC207639, Right lane) cDNA for 48 hrs and lysed. Equivalent amounts of cell lysates (5 ug per lane) were separated by SDS-PAGE and immunoblotted with anti-NSMCE2(Cat# [TA501632]). Positive lysates [LY406558] (100ug) and [LC406558] (20ug) can be purchased separately from OriGene.



Western blot validation of overexpression lysate (Cat# [LY406558]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from un-transfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC207639 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).