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# Product datasheet for RG207639

## 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:** | TurboGFP |
| **Symbol:** | NSE2 |
| **Synonyms:** | C8orf36; MMS21; NSE2; ZMIZ7 |
| **Mammalian Cell Selection:** | Neomycin |
| **Vector:** | pCMV6-AC-GFP (PS100010) |
| **E. coli Selection:** | Ampicillin (100 ug/mL) |

**ORF Nucleotide Sequence:**

>RG207639 representing NM_173685
Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCCGCGATCGCC

ATGCCAGGACGTTCCAGTTCAAATTCAGGTTCAACTGGTTTCATCTCCTTCAGTGGTGTAGAGTCTGCTC
TCTCCTCCTTGAAAAACTTCCAAGCCTGTATCAACTCTGGTATGGACACAGCTTCTAGTGTTGCTTTGGA
TCTTGTGGAAAGTCAGACTGAAGTGAGTAGTGAATATAGTATGGACAAGGCAATGGTTGAATTTGCTACA
TTGGATCGGCAACTAAACCATTATGTAAAGGCTGTTCAATCTACAATAAATCATGTGAAAGAAGAACGTC
CAGAAAAAATACCAGATTTAAAATTATTGGTAGAGAAGAAATTTTTGGCTTTACAGAGCAAGAATTCTGA
TGCAGACTTTCAAAATAATGAAAAATTTGTACAGTTTAAACAACAGCTGAAAGAACTAAAGAAGCAATGT
GGTCTTCAAGCTGACAGAGAAGCTGACGGAACAGAAGGAGTGGATGAAGATATAATTGTGACCCAAAGTC
AGACCAACTTCACCTGCCCCATTACAAAGGAGGAAATGAAGAAGCCAGTGAAAAATAAAGTGTGTGGCCA
CACCTATGAAGAGGACGCCATTGTTCGCATGATTGAGTCCAGGCAAAAGCGGAAGAAAAAGGCCTATTGC
CCTCAAATTGGCTGTAGCCACACGGATATAAGAAAGTCAGATCTTATCCAGGATGAAGCACTTAGAAGGG
CAATTGAGAACCATAACAAGAAAAGACATCGTCATTCCGAG

ACGCGTACGCGGCCGCTCGAG - GFP Tag - GTTTAA

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**Protein Sequence:**

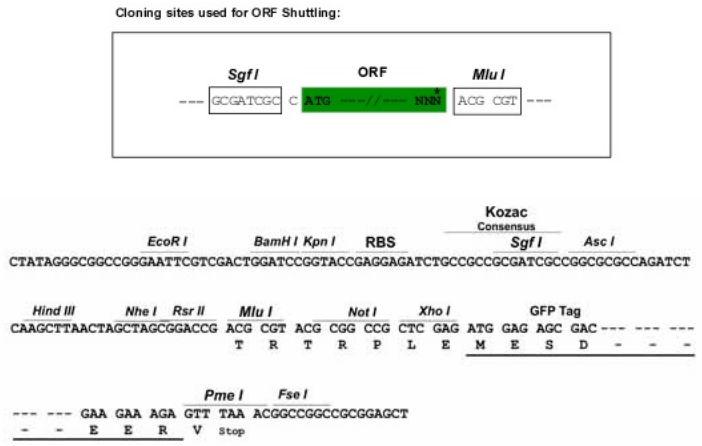
>RG207639 representing NM_173685
Red=Cloning site Green=Tags(s)

MPGRSSSNSGSTGFISFSGVESALSSLKNFQACINSGMDTASSVALDLVESQTEVSSEYSMDKAMVEFAT
LDRQLNHYVKAVQSTINHVKEERPEKIPDLKLLVEKKFLALQSKNSDADFQNNEKFVQFKQQLKELKKQC
GLQADREADGTEGVDEDIIVTQSQTNFTCPITKEEMKKPVKNKVCGHTYEEDAIVRMIESRQKRKKKAYC
PQIGCSHTDIRKSDLIQDEALRRAIENHNKKRHRHSE

TRTRPLE - GFP Tag - V

**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.

**RefSeq:** NM_173685.4

**RefSeq Size:** 1258 bp

**RefSeq ORF:** 744 bp

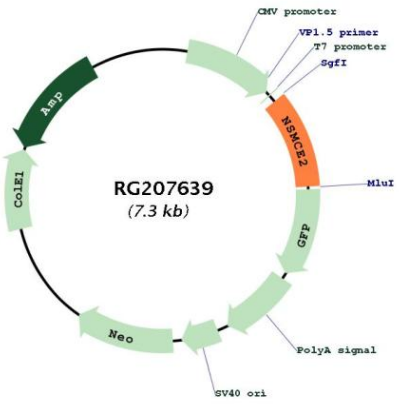
**Locus ID:** 286053

**UniProt ID:** Q96MF7

**Cytogenetics:** 8q24.13

**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 RG207639