

Product datasheet for **RC203568**

SMCR7L (MIEF1) (NM_019008) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	SMCR7L (MIEF1) (NM_019008) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	SMCR7L
Synonyms:	AltMIEF1; dj1104E15.3; HSU79252; MID51; MIEF1-MP; SMCR7L
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)



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ORF Nucleotide Sequence:

>RC203568 ORF sequence
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGCATCGCC**

ATGGCAGGCGCTGGTGAGCGCAAAGGCAAGAAGGATGACAATGGCATTGGCACGGCCATTGACTTTGTGC
 TCTCCAATGCCCGCTGGTGTGGGGTGGGTGGAGCGCCATGCTGGGCATCGCCACGCTGGCAGTTAA
 GCGGATGTACGATCGGGCGATCAGTGCCCTACCAGCCCACCCGCTGAGCCATTGGGGAAAAGGAGC
 TGGGAAGAACCCTGATGGGCTCCACGACTGCTGAACAGGGACATGAAGACGGGCTGAGCCGGT
 CCTTGCAGACCCTCCACAGACTCCTCCACTTCGACACAGATACATTCTGCCGCCCCGGCCAAAGCC
 AGTGGCCAGGAAGGGCCAGGTAGACTTGAAGAAGTACGACTCCGCATGTCCCTGCAGGAGAAATCTT
 ACTTACTACCGGAACCGGCAGCCATCCCTGCTGGAGAGCAGGCTCGGGCAAGCAAGCTGCTGTGGACA
 TATGTGCCGAGCTCCGGAGCTTCTGCGGGCAAGTTGCCTGACATGCCGCTTCGGGACATGACTTGGAG
 TGGCAGCTCTACGATGACCTGCAGGTGGTGCAGCTGACCACATCCAACCTATTGTGCCCTTGTGCTG
 GAGCAGAACCTGTGGTCAATGATTCTGGTGAAGACACCATCATGAATGTCCCTGGCTTCTCTCTGGTGC
 GTCGTGAGAATCCAGAGTACTTCTCTGTTGGGAGCAGTACTGGGACCGCTGTGTAGTAGGGGGCTACCT
 CTCTCAAAGACAGTCCGAGATACATTTGAGAAGTAGTGGCTGGCTCCATCAATTGGCCAGCCATAGGG
 TCCCTCTTGGACTATGTGATCCGCCCAGCCACCCCAAGCCCTCACACTGGAGGTGCAGTATGAGC
 GTGACAAACATCTTTCATTGACTTCTGCCATCAGTGACCCTCGGTGACACAGTCTTGGTGGCCAAACC
 ACACCGGCTAGCCAGTATGACAACCTGTGGCGGTGAGCCTGCGTCCCGGGAGACGGCACGCCTGCGG
 GCTCTGGACCAGGCTGACTCGGGCTGCCGATCTGTGCCTCAAGATCCTCAAGGCCATATGCAAGTCCA
 CCCCAGCTCTGGCCACCTCACTGCCAGCCAGCTAACCAATGTCATCTCCAATTGGCCAGGAGGAGGC
 TGACTGGTCTCCGGATATGCTGGCCGACCGTTTCTGACAGCCTTGAGGGGACTTATCAGCTACTTAGAG
 GCTGGAGTCTGCCAGTGCCTAAACCCCAAGGTGAACCTATTTGCAGAGCTCACCCCTGAAGAAATAG
 ACGAATTAGGATACACTCTGATTGCTCATTGTCTGAGCCAGAGGTGCTGCTGCAGACG

ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
 ACAAGGATGACGACGATAAGGTTTAA

Protein Sequence:

>RC203568 protein sequence
 Red=Cloning site Green=Tags(s)

MAGAGERKGGKDDNGIGTAIDFVLSNARLVLGVGGAAMLGIATLAVKRMVDRAISAPTSPTRLSHSGKRS
 WEEPNNWMSPRLLNRDMKTGLSRSLQTLPTDSSFTDFTFCPPRPKPVARKGQVDLKKSRRLRMSLQEKLL
 TYRNRAAIPAGEQARAKQAAVDICAELRSFLRAKLPDMPLRDMYLSGSLYDDLQVVTADHIQLIVPLVL
 EQNLWSCIPGEDTIMNVPGFLLVRRENPEYFPRGSSYWDRCVGGYLSPKTVADTFEKVVAGSINWPAIG
 SLLDYVIRPAPPEALTLEVQYERDKHLFIDFLPSVTLGDTVLVAKPHRLAQYDNLWRLSLRPAETARLR
 ALDQADSGCRSLCLKILKAICKSTPALGHLTASQLTNVILHLAQEEADWSPDMLADRFLQALRGLISYLE
 AGVLPALNPKVNLFAELTPEEIDELGYTLYCSLSEPEVLLQT

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Chromatograms:

https://cdn.origene.com/chromatograms/mk6413_b11.zip

Restriction Sites:

Sgfl-Mlul

Cloning Scheme:


ACCN: NM_019008

ORF Size: 1389 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.

Note: Plasmids are not sterile. For experiments where strict sterility is required, filtration with 0.22um filter is required.

RefSeq: [NM_019008.5](#)

RefSeq Size: 5730 bp

RefSeq ORF: 1392 bp

Locus ID: 54471

UniProt ID: [Q9NQG6](#)

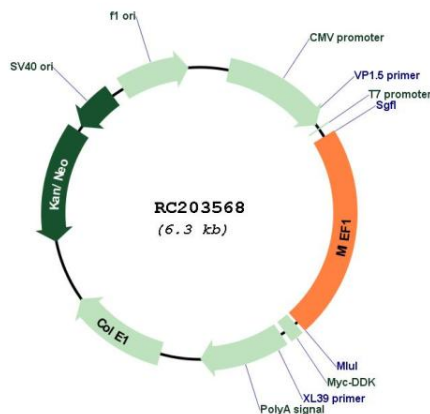
Cytogenetics: 22q13.1

Protein Families: Transmembrane

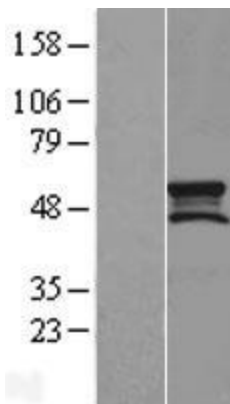
MW: 51.3 kDa

Gene Summary: Mitochondrial outer membrane protein which regulates mitochondrial fission. Promotes the recruitment and association of the fission mediator dynamin-related protein 1 (DNM1L) to the mitochondrial surface independently of the mitochondrial fission FIS1 and MFF proteins. Regulates DNM1L GTPase activity and DNM1L oligomerization. Binds ADP and can also bind GDP, although with lower affinity. Does not bind CDP, UDP, ATP, AMP or GTP. Inhibits DNM1L GTPase activity in the absence of bound ADP. Requires ADP to stimulate DNM1L GTPase activity and the assembly of DNM1L into long, oligomeric tubules with a spiral pattern, as opposed to the ring-like DNM1L oligomers observed in the absence of bound ADP. Does not require ADP for its function in recruiting DNM1L.[UniProtKB/Swiss-Prot Function]

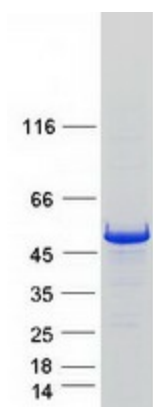
Product images:



Circular map for RC203568



Western blot validation of overexpression lysate (Cat# [LY412846]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC203568 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).



Coomassie blue staining of purified MIEF1 protein (Cat# [TP303568]). The protein was produced from HEK293T cells transfected with MIEF1 cDNA clone (Cat# RC203568) using MegaTran 2.0 (Cat# [TT210002]).