

Product datasheet for **RC212643**

MIOS (NM_019005) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	MIOS (NM_019005) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	MIOS
Synonyms:	MIO; Sea4; Yulink
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)



[View online »](#)

**ORF Nucleotide
Sequence:**

>RC212643 representing NM_019005
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGCATCGCC**

ATGAGCGGTACCAAACCTGATATTTTATGGGCACCACACCATGTTGATAGATTTGTTGTGTGACTCAG
 AACTAAGTCTTTATCATGTGGAATCTACTGTGAATTCAGAAGCTCAAAGCTGGATCTTTACGTTTATCTGA
 AGACTCTGCAGCTACATTACTGTCAATAAATTCAGATACACCCTATATGAAATGTGTTGCCTGGTATCTT
 AATTATGATCCTGAATGTCTGCTGGCAGTTGGACAAGCAAATGGTCGAGTTGACTTACAAGCCTTGGTC
 AAGATCATAACTCAAAGTTCAAAGATTTGATAGGAAAAGAGTTTGTCCAAAACATGCACGACAATGTAA
 TACCCTTGCCTGGAATCCACTGGATAGTAACTGGCTAGCTGCTGGTTTAGATAAGCACAGAGCTGACTTT
 TCAGTGCTAATATGGGATATCTGCAGCAAATACTCCTGATATAGTTCCCATGGAAAAAGTGAACCTTT
 CAGCAGGTGAAACTGAAACAACATTATTAGTAACAAAACCACTTTATGAGTTAGGACAGAATGATGCTTG
 TCTGTCTCTTTGTTGGCTTCCACGAGACCAGAACTTCTCCTTGTGGTATGCATCGTAACCTAGCTATA
 TTTGATCTTCGGAATACAAGCCAAAAGATGTTCTGTAATACAAAAGCTGTTCAAGGTGTGACGGTAGACC
 CATATTTCCACGATCGTGTGCTTCTTCTATGAAGGTCAGGTTGCAATATGGGATCTTAGAAAAATTTGA
 GAAGCCAGTTTGGACATTGACTGAGCAACCAAAACCTTAACAAAAGTAGCATGGTGTCCCACTAGGACT
 GGTCTACTTGGCACTTTAACAAGGGATAGTAATATTATTAGATTGATGATGCAGCATACACCCACTC
 CCATTGGGGATGAAACTGAACCCACAATAATTGAAAGAAGTGTGCAACCTTGTGACAATTACATTGCTTC
 CTTTGGCTGGCATCCAACAAGTCAAATCGAATGATAGTTGTAACCTCCAACCGAACAATGTCAGACTTC
 ACTGTTTTTGAAGGATATCTCTTGCCTGGAGCCCAATTACATCTTTAATGTGGGCTTGTGGTCGTCATT
 TATATGAATGTACGGAAGAAGAAAATGATAATTTCTTTAGAAAAAGATATAGCAACGAAGATGCGTTTCG
 GGCTTTATCAAGGTATGGACTTGATACAGAGCAGGTGTGGAGGAACCACATTTTAGCTGGAAATGAAGAT
 CCACAGCTCAAGTCACTCTGGTATACTCTGCACCTTTATGAAGCAATACACAGAAGATATGGATCAGAAAT
 CTCAGGCAACAAAGGATCATTGGTTTTATGCAGGAATTAATCAATTGTAAGTCAATCGTTGGGAATGGT
 GGAAAGCAGCAGACATAATTGGAGTGGTTGGATAAGCAAAGTGAATTCAAAATTTAAATGAAGAGAGA
 ATCTTAGCTTTACAGCTTTGTTGGTGGATAAAGAAAGGAACGGATGTAGACGTGGGGCCATTTTGAAGT
 CCCTTGTACAAGAAGGGGATGGGAAAGAGCTGCTGCTGTGGCATTGTTCAACTGGATATTCGCCGAGC
 AATCCAAATCCTGAATGAAGGGCATCTTCTGAAAAGGAGATCTGAATCTCAATGTGGTAGCAATGGCT
 TTATCGGGTTATACGGATGAGAAGAACTCCCTTTGGAGAGAAATGTGTAGCACACTGCGATTACAGCTAA
 ATAACCCGATTTTGTGTGCATGTTTGCATTTCTGACAAGTGAACAGGATCTTACGATGGAGTTTTGTA
 TGAAAACAAAGTTGCAGTACGTGACAGAGTGGCATTGCTTGTAAATTCCTTAGTGATACTCAGTTAAAT
 AGATACATCGAAAAGTTGACCAATGAAATGAAAGAGGCTGGAAATTTGGAAGGAATTTGCTTACAGGCC
 TTAATAAGATGGAGTGGACTTAATGGAGAGTTATGTTGATAGAAGTGGAGATGTTCAAACAGCAAGTTA
 CTGTATGTTACAGGGTTCACCTTTAGATGTTCTTAAAGATGAAAGGGTTCAGTACTGGATTGAGAATTA
 AGAAATTTATTAGATGCCTGGAGTTTTGGCATAAACGAGCTGAATTTGATATTCACAGGAGTAAGTTGG
 ATCCCAGTCCAAGCCTTTAGCACAAGTTTTGTGAGTTGCAATTTCTGTGGCAAGTCAATCTCCTACAG
 CTGTTGAGCTGTGCCTCATCAGGGCAGAGTTTTAGTCAGTATGGTGTGAGTGGCTCACCACGAAATCT
 AAAGTCAAAAGTTGCTGGCTGTGAAAACCACTTCTCGATGTGCGCTTTGTCTCATTAAATATGGGAA
 CACCAGTTTCTAGCTGTCTGGAGGAACCAAAATCAGATGAAAAGTGGACTTGAGCAAGGACAAAAAAT
 AGCCCAATTTAACTGGTTTACATGGTGTGATAATTGCAGGCACGGTGGACATGCTGGACATATGCTT
 AGTTGGTTCAGGGACCATGCAGAGTGCCTGTGTCTGCATGCACGTGTAATGTATGCAGTTGGATACAA
 CAGGGAATCTGGTACCTGCAGAGACTGTCCAGCCA

ACGCGTACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAATGATATCTGGATT
 ACAAGGATGACGACGATAAGGTTTAA

Protein Sequence: >RC212643 representing NM_019005
 Red=Cloning site Green=Tags(s)

MSGTKPDILWAPHHVDRFVVCDSLESLYHVESTVNSELKAGSLRLESDSAATLLSINSDTPYMKCVAWYL
 NYDPECLLAVGQANGRVVLTSLGQDHNKFKDLIGKEFVPKHARQCNTLAWNPLDSNWLAAGLDKHRADF
 SVLIWDICSKYTPDIVPMEKVKLSAGETETLLVTKPLYELGQNDACLSCWLPRDQKLLLAGMHRNLAI
 FDLRNTSQKMFVNTKAVQGVTVDPYFHDRVASFYEGQVAIWDLRKFEPVLTLEQPKPLTKVAWCPTRT
 GLLATLTRDSNIIRLYDMQHTPTPIGDETEPTIERSVQPCDNYIASFAWHPTSQNRMI VVTPNRTMSDF
 TVFERISLAWSPITSLMWACGRHLYECTEEENDNSLEKDIATKMRLRALSRYGLDTEQVWRNHILAGNE
 PQLKSLWYTLHFMKQYTEDMDQKSPGNKGSVYAGIKSIVKSSLGMVESSRHNWSGLDKQSDIQNLNEER
 ILALQLCGWIKKGTDVDVGPFLNSLVQEGEWERA AVALFNLDIRRAIQILNEGASSEKGDNLNVVAMA
 LSGYTDEKNSLWREMCSTLRLQLNNPYLCVMFAFLTSETGSYDGLYENKVAVRDRVAFACKFLSDTQLN
 RYIEKL TNEMKEAGNLEGILLTGLTKDGDVLMESYVDRTGDVQTASYCMLQGSPLDVLKDERVQYWIENY
 RNLLDAWRFWHKRAEFDIHRSKLDPSSKPLAQVFVSCNFCGKSI SYSCSAVPHQGRGFSQYGVSGSPTKS
 KVTSCPGCRKPLPRCALCLINMGTPVSSCPGGTKSDEKVDLSKDKKLAQFNNWF TWCHNCRHGGHAGHML
 SWFRDHAACPVSACTCKCMQLD TTGNLVAETVQP

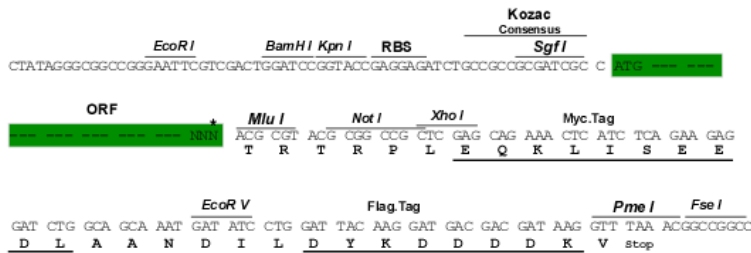
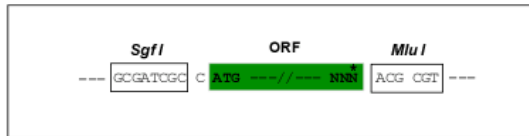
TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Chromatograms: https://cdn.origene.com/chromatograms/mk6597_h08.zip

Restriction Sites: SgfI-MluI

Cloning Scheme:

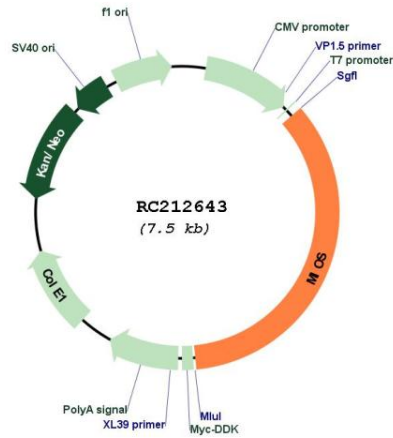
Cloning sites used for ORF Shuttling:



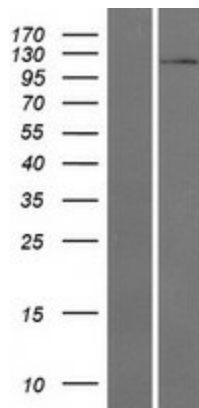
* The last codon before the Stop codon of the ORF

ACCN:	NM_019005
ORF Size:	2625 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:	<ol style="list-style-type: none">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_019005.3 , NP_061878.3
RefSeq Size:	3340 bp
RefSeq ORF:	2628 bp
Locus ID:	54468
UniProt ID:	Q9NXC5
Cytogenetics:	7p21.3
Domains:	WD40
MW:	98.4 kDa
Gene Summary:	As a component of the GATOR subcomplex GATOR2, functions within the amino acid-sensing branch of the TORC1 signaling pathway. Indirectly activates mTORC1 and the TORC1 signaling pathway through the inhibition of the GATOR1 subcomplex (PubMed:23723238). It is negatively regulated by the upstream amino acid sensors SESN2 and CASTOR1 (PubMed:25457612, PubMed:27487210).[UniProtKB/Swiss-Prot Function]

Product images:



Circular map for RC212643



Western blot validation of overexpression lysate (Cat# [LY412843]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC212643 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).