

Product datasheet for MR222613

Nisch (NM_022656) Mouse Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Nisch (NM_022656) Mouse Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	Nisch
Synonyms:	1200007D05Rik; 3202002H23Rik; AW494485; I-1
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
Cell Selection:	Neomycin
ORF Nucleotide Sequence:	>MR222613 representing NM_022656, codon optimized . Due to the complexity of NM_022656, the ORF clone is codon optimized for mammalian Expression. The nucleotide sequence differs from the reference sequence, yet the amino acid sequence remains identical.

Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCC**CGATCGCC**

ATGGCTGCAGCTACTCTTTCTTTTCGGACCGAACGCGAGGCGGAACCTGCTAAGGAAGCTCGAGTCGTTG
GAAGCGAATTGGTGGACACCTATACTGTGTATGTGATACAGGTGACCGACGGAACCATGAGTGGACCAT
TAAGCACAGGTA CTGATTTTCACGACCTCCATGAGAACTGGTCGCAGAGAGGAAAATCGACAAGTCC
CTGCTGCCTCCCAAGAAGATCATTGAAAGA ACTCTAGATCTCTCGTGGAGAAACGGGAAAGAGATTTGG
AAGTGTATTTGCAA ACTCTCTGACCACATTTCTGACGTAGCCCAAGAGTCTTGCCCACTTCTCTGCA
CTTCCACCTTTATGAGGTGAACGGCGTAACAGCTGCATTGGCCGAGGAGCTTTCGAGAAGGGCGAGCAGC
CTCTTGGGTGCTGGAGAGGTGTTTCGCAATCAGGCCACTGCAGCTTACGCCATCACTGAACAGCTCCAGC
AGGGTAAACCCACCTGCGCGTCAGGTGACGCAAGACGGATCTCGGCCATATCTTGGATTTACATGCGAG
GCTCAAGTACCTGAAGGTTCCGGCACAGAGGGCCCTTTTGGCACGTCTAACATTAAGAGCAGCTGCTG
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GAGGACTGGTCACCAGTAAGCCAACCTGGCTACTATGAGTGTGCGGTTTAGCGCAACATCAATGAAAGA
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TCGATGAAAGTGTGAAACTGATCCGAAGATAGAATATCTTGATCTGTACACAACGGGTTGAGAGTAGT
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GGCGTACATACCAAATTGGGAAATGTAAGACGCTCAATCTCGCCGGAATTTCTCGGAAAGCCTGAGTG
GACTGCATAAACTCTACAGCTTGGTCAATGTAGACCTCCGAGATAACAGAATCGAGCAGCTGGACGAAGT



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GAAATCTATAGGAAGCCTTCCATGTTTGGAAACGACTGACCCCTTCTCAATAACCCACTCTCCATCATCCCT
GATTACAGAACGAAAGTGTGTGCACAGTTGCGCGAGAGAGCTAGCGAGATTTGCCTTGATGACGTAGCAA
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GGTTCCCTCCGGCAGCACCCGCTAGCGCTTACTGCCACAGCCTATTTTGTCTAATCAAGGCATTATGT
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GCGCGAAAGTCGAGAGAAATTGATCTCTTCTTGGCCAGACAGTGGGAGGCACTCTGCGGACGCGAACT
TCCAGTCGAACTGACCGG

ACGCGTACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAATGATATCCTGGATT
ACAAGGATGACGACGATAAGGTTTAA

Protein Sequence:

>MR222613 representing NM_022656
Red=Cloning site Green=Tags(s)

MAAATLSFGPEREAPEAKEARVVGSELVDTYTYVYVQVTDGNHEWTIKHRYSDFDLHEKLVAERKIDKS
LLPPKKIIGKNSRSLVEKRERDLEVYLQTLTTFPDVAPRVLAHFLHFHLYEVNGVTAALAEELFEKGEQ
LLGAGEVFAIRPLQLYAITEQLQQGKPTCASGDAKTDLGHILDFTCRCLKYLKVSGETGPFSTNIKEQLL
PFDSLIFKSLHQVEISHDAKHIRGLVTSKPTLATMSVRFSATSMKEVLAPEASEFDEWEPEGTATLGGP
VTAIIPWQALTTDLSHNSICEIDESVKLIPKIEYLDLSHNGLRVVDNLQHLYNLVHLDL SYNKLSSE
GVHTKLGKLVKTLNLAGNFLESLGLHKL YSLVNVDLRDNRIEQLDEVKSIGSLPCLERL TLLNNPLSIIP
DYRTKVL SQFGERASEICLDDVATTEKELDTVEVLKAIQKAKDVKSKLSNTEKKAGEDFRLPPAPCIRPG
GSPPAAPASASLPQILSNQIMFVQEEALASSLSSTDLSLPPEDHRPIARACSDSLESIPAGQVASDDL
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EEAHGEQGE EEEEEEDVAENRYFEMGPPDAEEEEEGSGQGEDEDEDEEAEERLAL EWALGADEDF
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FGFLMPELCLVLKVRHSENTLFIISDAANLHEFHADLRSCFAPQHMAMLCSPILYGSHTTLQEFRLQLLT
FYK VAGGSQERSQGCFPVYLVYSDKRMVQTPAGDYSGNIEWASCTLC SAVRRSCCAPSEAVKSAAPYWL
LLTSQHNLVNIKADFNPMNPRGTHNCRNRSFKLSRVPLSTVLLDPTRSCTQPRGAFADGHVLELLVGYRF
VTAIFVLPHEKFHFLRVYNQLRASLQDLKTVVISKNPSAKPRNQPAKSRASAEQRLQETPADAPAAVP
PTASAPAPAEALAPDLAPVQAPGEDRGLTSAEAPAAAEAPAAAEAPAAAEAPAAAEAPAAAEAPAAAEAP
APAEAPAAAEAPAAAEAPAAAEAPAAAEAPASAEAPAPNQAPAPARGPAPARGPAPAGGPAPAEALAQAE
VPAQYPSERLIQSTSEENQIPSHLPVPCPSLQHIARLRGRAIIDLFHNSIAEVENEELRHLLWSSVVFYQT
PGLEVTACVLLSSKAVYF ILHDGLRRYFSEPLQDFWHQKNTDYNNSPFHVSQCFVLKLSLQSVNVGLFD
QYFRLTGSSTQVVTCLTRDSYLTHCFLQHLMLVLSLERTPSPEPVKDFYSEFGDKNTGKMYENELIH
SSRVKFTYPSSEEVGDLTYIVAQKMADPAKNPALSILLYIQAQVVTPHLGRGRGPLRPKTLTLLTSAEIF
LLDEDYIHYPLEFAKEPPQRDRYRLDDGRRVRDLDRVLMGYYPYQALTLVFDDTQGHDLMGSVTLDFH
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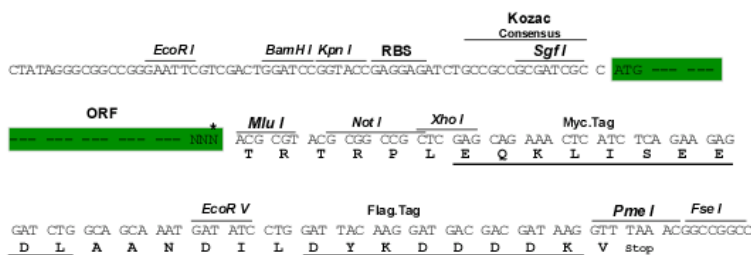
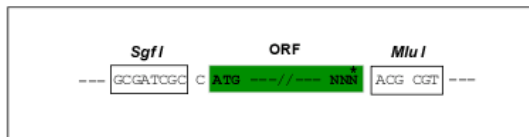
TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Restriction Sites:

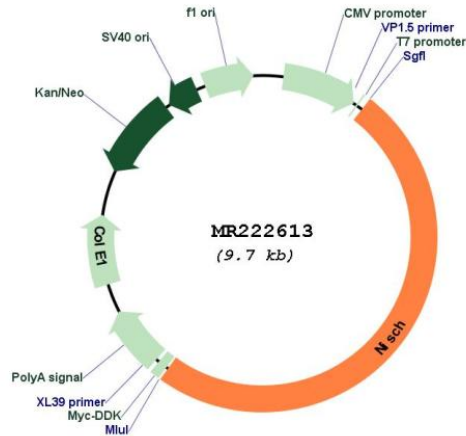
Sgfl-MluI

Cloning Scheme:

Cloning sites used for ORF Shutting:



* The last codon before the Stop codon of the ORF

Plasmid Map:


ACCN: NM_022656

ORF Size: 4779 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.

RefSeq: [NM_022656.2](#), [NP_073147.2](#)

RefSeq Size: 5606 bp

RefSeq ORF: 4782 bp

Locus ID: 64652

UniProt ID: [Q80TM9](#)

Cytogenetics: 14 B

MW: 175 kDa

Gene Summary: Acts either as the functional imidazoline-1 receptor (I1R) candidate or as a membrane-associated mediator of the I1R signaling. Binds numerous imidazoline ligands that induces initiation of cell-signaling cascades triggering to cell survival, growth and migration. Its activation by the agonist rilmenidine induces an increase in phosphorylation of mitogen-activated protein kinases MAPK1 and MAPK3 in rostral ventrolateral medulla (RVLM) neurons that exhibited rilmenidine-evoked hypotension (By similarity). Blocking its activation with efaroxan abolished rilmenidine-induced mitogen-activated protein kinase phosphorylation in RVLM neurons (By similarity). Acts as a modulator of Rac-regulated signal transduction pathways. Suppresses Rac1-stimulated cell migration by interacting with PAK1 and inhibiting its kinase activity. Also blocks Pak-independent Rac signaling by interacting with RAC1 and inhibiting Rac1-stimulated NF-kB response element and cyclin D1 promoter activation. Inhibits also LIMK1 kinase activity by reducing LIMK1 'Tyr-508' phosphorylation. Inhibits Rac-induced cell migration and invasion in breast and colon epithelial cells. Inhibits lamellipodia formation, when overexpressed. Plays a role in protection against apoptosis (By similarity). Involved in association with IRS4 in the enhancement of insulin activation of MAPK1 and MAPK3 (By similarity). When overexpressed, induces a redistribution of cell surface ITGA5 integrin to intracellular endosomal structures (By similarity).[UniProtKB/Swiss-Prot Function]