

Product datasheet for MR203232

Neil1 (BC043297) Mouse Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Neil1 (BC043297) Mouse Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	Neil1
Synonyms:	2810450N13Rik; Nei1
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
ORF Nucleotide Sequence:	>MR203232 ORF sequence Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCC**CGATCGCC**

ATGCCAGAGGGCCAGAGCTGCACCTGGCCAGCCACTTTGTGAATGAGACATGTAAGGGGCTGGTATTTG
GTGGGTGTGTGGAGAAGTCCTCTGTCAGCCGGAACCCGGAGGTGCCCTTTGAGAGCAGTGCCTACCAT
CTCAGCTTTAGCCCGAGGCAAGGAGCTGCGCTTGACATTGAGCCCCCTGCCTGGTCCCAGCCCCCTCAG
AAGCCACTGTCCCTTGTCTTCCGCTTTGGGATGTCAGGATCCTTCCAGCTGGTACCCGCAGAGGCACTGC
CCCGCCACGCCATCTACGTTTTTACACAGCCCCACCTGCTCCCCGGCTTGCCCTTTGCTTCGTAGACAT
CCGTGCTTTGGCACTGGGATCCTGGGGTGAATGGCAACCAGGCCGTGGACCTGTGTCTTGCTGGAG
TATGAACGGTTCAGAGAACTACTTCGGAACCTATCAGACAAAGCCTTTGACCGGCCATCTGCGAGG
CCTTGTGGACCAGAGGTTCTTCAATGGCATTGGCAACTATCTGCGGGCAGAGATCCTGTACCGGCTGAA
GATCCCTCCTTTGAGAAGGCTCGTACAGTTCTAGAGGCCCTGCAACAGTGCCGGCCGAGCCAGAGCTG
ACCCTGAGCCAGAAGATCAAGGCCAACTACAGAACCCAGACCTGCTGGAAGTGTGCACTTGGTGGCCA
AGGAAGTGTTTCAGCTGGGTGAGGCTGGGGAGGTCAAGATGGCCGGCGGCTCTACCT

ACGCGTACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
ACAAGGATGACGACGATAAGGTTTAA



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Protein Sequence: >MR203232 protein sequence
 Red=Cloning site Green=Tags(s)

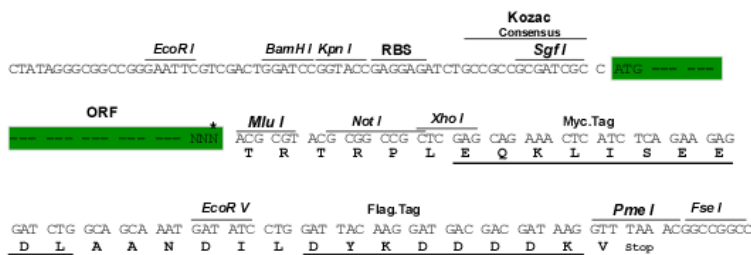
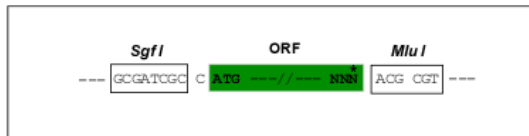
MPEGPELHLASHFVNETCKGLVFGGCVKSSVSRNPEVPFESSAYHISALARGKELRLTLSPLPGSQPPQ
 KPLSLVFRFGMSGFQLVPAEALPRHAHLRFYTAPPAPRLALCFVDIRRFGHWDPPGGEWQPGRGPCVLLLE
 YERFRENVLRLNSDKAFDRPICEALLDQRFNFNGIGNYLRAEILYRLKIPPFKARTVLEALQQCRPSPEL
 TLSQKIKAKLQNPDLLELCHLVPKEVVQLGEAWGGQDGRRLPL

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Restriction Sites: SgfI-MluI

Cloning Scheme:

Cloning sites used for ORF Shuttling:



* The last codon before the Stop codon of the ORF

ACCN: BC043297

ORF Size: 759 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: [BC043297](#), [AAH43297](#)

RefSeq Size: 1857 bp

RefSeq ORF: 761 bp

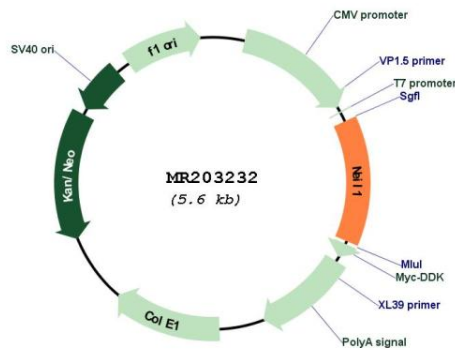
Locus ID: 72774

Cytogenetics: 9 B

MW: 28.5 kDa

Gene Summary: Involved in base excision repair of DNA damaged by oxidation or by mutagenic agents. Acts as DNA glycosylase that recognizes and removes damaged bases. Has a preference for oxidized pyrimidines, such as thymine glycol, formamidopyrimidine (Fapy) and 5-hydroxyuracil. Has marginal activity towards 8-oxoguanine. Has AP (apurinic/aprimidinic) lyase activity and introduces nicks in the DNA strand. Cleaves the DNA backbone by beta-delta elimination to generate a single-strand break at the site of the removed base with both 3'- and 5'-phosphates. Has DNA glycosylase/lyase activity towards mismatched uracil and thymine, in particular in U:C and T:C mismatches. Specifically binds 5-hydroxymethylcytosine (5hmC), suggesting that it acts as a specific reader of 5hmC.[UniProtKB/Swiss-Prot Function]

Product images:



Circular map for MR203232