

Product datasheet for **RG227916**

NEIL2 (NM_001135747) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	NEIL2 (NM_001135747) Human Tagged ORF Clone
Tag:	TurboGFP
Symbol:	NEIL2
Synonyms:	NEH2; NEI2
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)
ORF Nucleotide Sequence:	>RG227916 representing NM_001135747 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCC**CGATCGCC**

ATGCCAGAAGGGCCGTTGGTGAGGAAATTCACCATTTGGTCTCCCCCTTGTGGGTCAGCAGGTGGTCA
AGACAGGGGGCAGCAGTAAGAAGCTACAGCCCGCCAGCCTGCAGTCTCTGTGGCTCCAGGACACCCAGGT
CCATGGAAAGAAATTATTCCTTAGATTTGATCTAGATGAAGAAATGGGGCCCCCTGGCAGCAGCCCAACA
CCAGAGCCTCCACAAAAGAAGTGCAGAAGGAAGGGGCTGCGGACCCAAAGCAGGTCGGGGAGCCACGG
GGCAGAAGACCCTTGATGGATCCTCACGGTCTGCAGAGCTCGTCCCCAGGGCGAGGATGATTCTGAGTA
TTTGGAGAGAGACGCCCCCTGCAGGAGATGCTGGGAGGTGGCTGCGTGTACGCTTTGGTTTGGCAGC
GTTTGGGTGAACGATTTCTCCAGAGCCAAGAAAGCCAACAAGAGGGGGGACTGGAGGGACCTTCCCCGA
GGTTGGTCTGCACTTTGGTGGTGGTGGCTTCTGGCATTTTATAATTGTGAGTTGTCTTGGAGCTCTTC
CCCGGTGGTCACACCCACCTGTGACATCCTGTCTGAGAAGTTCCATCGAGGACAAGCCTTAGAAGCTCTA
GGCCAGGCTCAGCCTGTCTGCTATACACTGCTGGACCAGAGATACTTCTCAGGGCTAGGGAAACATCATT
AGAATGAAGCCTGTACAGAGCTGGGATCCATCCCCTTCTCTCGTTTCACTGCTGAGTGCCTCGCGTCG
GGAGGTCTGGTGGATCACGTGGTGGAGTTCAGTACAGCCTGGCTGCAGGGCAAGTCCAAGGCAGACCC
CAGCACACAGGTCTACCAGAAAGAAGTGCCTGCTGGCCACCAGGTCATGAAGGAGCGTTTGGGC
CGAAGATGGTTACAGAGGCTCACCTGGTGGTGCCCGCAGTCCAGCCCCAGTTGTGAGAGGAGCCAGA
GCAGTGCCAGTTCTCC

ACGCGTACGCGGCCGCTCGAG - GFP Tag - GTTTAA



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Protein Sequence: >RG227916 representing NM_001135747
 Red=Cloning site Green=Tags(s)

MPEGPLVRKFHHLVSPFVGQVVKTTGGSSKKLQPASLQSLWLQDTQVHGKKLFLRFDLDEEMGPPGSSPT
 PEPPQKEVQKEGAADPKQVGEPSGQKTLDGSSRSAELVPQGEDDSEYLERDAPAGDAGRWLRSFGLFGS
 VVWNDFSRRAKKANKRGDWRDPSRLVLHFGGGGFLAFYNCQLSWSSSPVVTPTCDILSEKFHRGQALEAL
 GQAQPVCYTLLDQRYFSLGNIIKNEALYRAGIHPLSLGSVLSASRREVLVDHVVEFSTAWLQGKFQGRP
 QHTQVYQKEQCPAGHQVMKEAFGPEDGLQRLTWWCPQCQPQLSEEPEQCQFS

TRTRPLE - GFP Tag - V

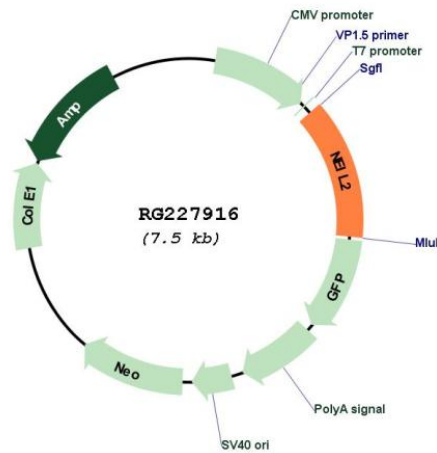
Restriction Sites: SgfI-MluI

Cloning Scheme:

Cloning sites used for ORF Shuttling:



Plasmid Map:



ACCN: NM_001135747

ORF Size: 813 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.
RefSeq:	NM_001135747.1 , NP_001129219.1
RefSeq Size:	2062 bp
RefSeq ORF:	816 bp
Locus ID:	252969
UniProt ID:	Q969S2
Cytogenetics:	8p23.1
Protein Families:	Druggable Genome
Protein Pathways:	Base excision repair
Gene Summary:	This gene encodes a member of the Fpg/Nei family of DNA glycosylases. These glycosylases initiate the first step in base excision repair by cleaving oxidatively damaged bases and introducing a DNA strand break via their abasic site lyase activity. This enzyme is primarily associated with DNA repair during transcription and acts preferentially on cytosine-derived lesions, particularly 5-hydroxyuracil and 5-hydroxycytosine. It contains an N-terminal catalytic domain, a hinge region, and a C-terminal DNA-binding domain with helix-two-turn-helix and zinc finger motifs. This enzyme interacts with the X-ray cross complementing factor 1 scaffold protein as part of a multi-protein DNA repair complex. A pseudogene of this gene has been identified. [provided by RefSeq, Mar 2017]