

## Product datasheet for **RC227701**

### NEIL2 (NM\_001135746) Human Tagged ORF Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	NEIL2 (NM_001135746) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	NEIL2
Synonyms:	NEH2; NEI2
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
ORF Nucleotide Sequence:	>RC227701 ORF sequence Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
GCC**CGATCGCC**

ATGCCAGAAGGGCCGTTGGTGAGGAAATTCACCATTTGGTCTCCCCCTTGTGGGTCAGCAGGTGGTCA  
AGACAGGGGGCAGCAGTAAGAAGCTACAGCCCGCCAGCCTGCAGTCTCTGTGGCTCCAGGACACCCAGGT  
CCATGGAAAGAAATTATTCCTTAGATTTGATCTAGATGAAGAAATGGGGCCCCCTGGCAGCAGCCCAACA  
CCAGAGCCTCCACAAAAAGAAGTGCAGAAGGAAGGGGCTGCGGACCCAAAGCAGGTCGGGGAGCCAGCG  
GGCAGAAGACCCTTGATGGATCCTCACGGTCTGCAGAGCTCGTCCCCAGGGCGAGGATGATTCTGAGTA  
TTTGGAGAGAGACGCCCTGCAGGAGATGCTGGGAGGTGGCTGCGTGTCAGCTTTGGTTTGGTGGCAGC  
GTTTGGGTGAACGATTTCTCCAGAGCCAAGAAAGCCAACAAGAGGGGGGACTGGAGGGACCTTCCCCGA  
GGTTGGTCTGCACTTTGGTGGTGGTGGCTTCTGGCATTTTATAAATGTGAGTTGTCTTGGAGCTCTTC  
CCCGGTGGTCACACCCACCTGTGACATCCTGTCTGAGAAGTTCCATCGAGGACAAGCCTTAGAAGCTCTA  
GGCCAGGCTCAGCCTGTCTGCTATACACTGCTGGACCAGAGATACTTCTCAGGGCTAGGGAAACATCATT  
AGAATGAAGCCTGTACAGAGCTGGGATCCATCCCCTTCTCTCGTTTCAGTCTGAGTGCCTCGCGTCG  
GGAGGTCTGGTGGATCACGTGGTGGAGTTCAGTACAGCCTGGCTGCAGGGCAAGTCCAAGGCAGACCC  
CAGCACACAGGTCTACCAGAAAGAACAGTGCCTGCTGGCCACCAGGTCATGAAGGAGGCGTTTGGGC  
CGAAGATGGGTTACAGAGGCTCACCTGGTGGTGCCCGCAGTGCCAGCCCCAGTTGTGAGAGGCCAGA  
GCAGTGCCAGTTCTCC

**ACGCGT**ACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT  
ACAAGGATGACGACGATAAGGTTTAA



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**Protein Sequence:** >RC227701 protein sequence  
Red=Cloning site Green=Tags(s)

MPEGPLVRKFHHLVSPFVGQVVKTTGGSSKKLQPASLQSLWLQDTQVHGKFLFRFDLDEEMGPPGSSPT  
 PEPPQKEVQKEGAADPKQVGEPSGQKTLDGSSRSAELVPQGEDDSEYLERDAPAGDAGRWLRSFGLFGS  
 VVWVDFSRACKANKRGDWRDPSRLVLHFGGGFLAFYNCQLSWSSPVVTPCTDILSEKFHRGQALEAL  
 GQAQPVICYTLLDQRYFSGLGNIIKNEALYRAGIHPLSLGSVLSASRREVLVDHVVEFSTAWLQGKFQGRP  
 QHTQVYQKEQCPAGHQVMKEAFGPEDGLQRLTWWCPQCQPQLSEEPEQCQFS

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

**Chromatograms:** [https://cdn.origene.com/chromatograms/mk6565\\_g08.zip](https://cdn.origene.com/chromatograms/mk6565_g08.zip)

**Restriction Sites:** SgfI-MluI

**Cloning Scheme:**



**ACCN:** NM\_001135746

**ORF Size:** 996 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\\_001135746.3](#)

**RefSeq Size:** 2202 bp

**RefSeq ORF:** 999 bp

**Locus ID:** 252969

**UniProt ID:** [Q969S2](#)

**Cytogenetics:** 8p23.1

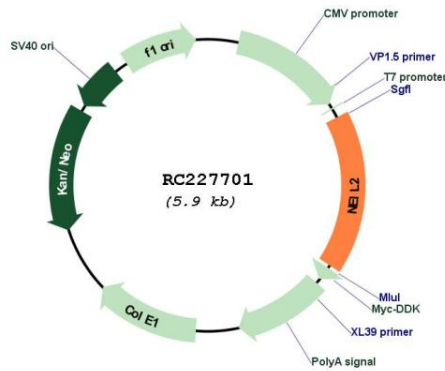
**Protein Families:** Druggable Genome

**Protein Pathways:** Base excision repair

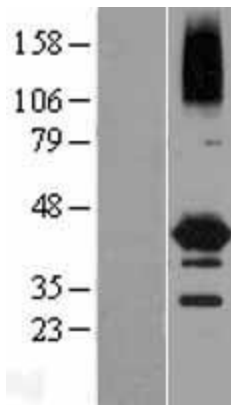
**MW:** 36.8 kDa

**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]

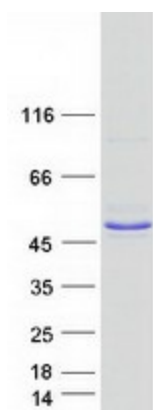
Product images:



Circular map for RC227701



Western blot validation of overexpression lysate (Cat# [LY427692]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC227701 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).



Coomassie blue staining of purified NEIL2 protein (Cat# [TP327701]). The protein was produced from HEK293T cells transfected with NEIL2 cDNA clone (Cat# RC227701) using MegaTran 2.0 (Cat# [TT210002]).