

## Product datasheet for **SC100057**

### NEIL2 (NM\_145043) Human Untagged Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	NEIL2 (NM_145043) Human Untagged Clone
Tag:	Tag Free
Symbol:	NEIL2
Synonyms:	NEH2; NEI2
Mammalian Cell Selection:	None
Vector:	<u><a href="#">pCMV6-XL5</a></u>
E. coli Selection:	Ampicillin (100 ug/mL)
Fully Sequenced ORF:	>OriGene ORF within SC100057 sequence for NM_145043 edited (data generated by NextGen Sequencing)

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ATGCCAGAAGGGCCGTTGGTGAGAAATTCACCATTTGGTCTCCCCCTTTGTGGGTCAG
CAGGTGGTCAAGACAGGGGCGAGCAGTAAGAAGCTACAGCCCGCAGCCTGCAGTCTCTG
TGGCTCCAGGACACCCAGGTCCATGAAAAGAAATTATTCCTTAGATTTGATCTAGATGAA
GAAATGGGGCCCCCTGGCAGCAGCCAAACACCAGAGCCTCCACAAAAAGAAGTGCAGAAG
GAAGGGGCTGCGGACCCAAAGCAGGTCGGGGAGCCAGCGGGCAGAAGACCCTTGATGGA
TCCTCACGGTCTGCAGAGCTCGTCCCCAGGGCGAGGATGATTCTGAGTATTTGGAGAGA
GACGCCCTGCAGGAGATGCTGGGAGGTGGCTGCGTGTCAGCTTTGGTTTGGTGGCAGC
GTTTGGGTGAACGATTTCTCCAGAGCCAAGAAAGCCAACAAGAGGGGGGACTGGAGGGAC
CCTTCCCCGAGGTTGGTCTGCACTTTGGTGGTGGTGGCTTCTGGCATTATAAATTGT
CAGTTGTCTTGGAGCTCTTCCCCAGTGGTCACACCCACCTGTGACATCCTGTCTGAGAAG
TTCCATCGAGGACAAGCCTTAGAAGCTCTAGGCCAGGCTCAGCCTGTCTGCTATACACTG
CTGGACCAGAGATACTTCTCAGGGCTAGGGAACATCATTAAAGAATGAAGCCTTGTACAGA
GCTGGGATCCATCCCCTTCTCTCGTTTCAGTCTGAGTGCCCTCGCGTCGGGAGGTCCTG
GTGGATCACGTGGTGGAGTTCAGTACAGCCTGGCTGCAGGGCAAGTTCCAAGGCAGACCG
CAGCACACACAGGTCTACCAGAAAGAACAGTGCCCTGCTGGCCACCAGGTCATGAAGGAG
GCGTTTGGGCCCGAAGATGGGTTACAGAGGCTCACCTGGTGGTGGCCGAGTGCCAGCCC
CAGTTGTCAGAGGAGCCAGAGCAGTGCCAGTTCTCCTAA

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Clone variation with respect to NM\_145043.2



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<b>5' Read Nucleotide Sequence:</b>	<p>&gt;OriGene 5' read for NM_145043 unedited</p> <p>TACGACTCACTATAGGGCGGCCGGAATTCGGCACGAGGGAAGGGAGGGCGGGCCCCGGG          CCCTCCTCCGTCTCAGCCGCCTGCGGAGGTGCTGCCACGCCTGGAGGCCCACTGACC          CTCAGACCCGGCTCTGCGCCCTCTCCCGCACCCGAGGCAGAGTTGGGAAAGCAGTGG          TCTTAGACCCCCACCTCGGGCACTCGGAAGAGAACGGCGGAGACAACCCCTCTCTTCC          CTGGCTGGCGCAGCGCCAGCCTCGAGCTCTCGGTAGCCCCGGGCAGGGAGGGCCGGAG          GGTGGGCGCGGCATCTTCAGCGACTCTTGAAGTCCCTTCGCGTCTCATCTTTCAAGGC          TGTTGCAGAGGGCGCTTGTCCACCTGCCATCTCCATAAAAAATCCCTAAACGAAACA          TGCCACGTGTCCGGAGATTTTCAGGACTTGGTGCATTTAGATGAAGGCTTTCCAGAA          GCTTCCCGTAGAAGAGGATCAGGCATCCAAGTGAAGGGATGCCAGAAGGGCCGTTG          GTGAGGAAANTTCAACATTTGGTCTCCCTTTTGGGTGAGGAGGTGGTCAAGCAGGG          GGCAGCAGTAAGAAGCTACAGCCCGCCAGCCTGCAGTCTCTGTGGCTCCAGGACACCCAG          GTCATGGAAGAAATATTCCTTAGATTTGATCTAGATGAAGAAATGGGGCCCCCTGGCA          GCAGCCAAACACCAGAGCCTNCACANAAAGAAGTGCAGAAGGAAGGGGCTGCNGACCCAA          TNGCAGTCGNGAGCCCAGCGGGCANNAGACCCCTGATGGATCCTCACGGTCTGCAGAGCT          CGTCCCCAGGGCGAGGATGATNCTGAGTATTTGGAGAGAGACNCCCTGCAAGAATGCCTG          GNAGTGGCTGCGTGCANCTTGGNTTGTGGCACCGTTTGGTGAACCATTCTCGAGCCAGA          AGCACAGGAGGGGCTGGAGGCCTCCCCAGGTGGTCTGACTCTGGGGGGG</p>
<b>3' Read Nucleotide Sequence:</b>	<p>&gt;OriGene 3' read for NM_145043 unedited</p> <p>NNCGGTACGACTATGNNACCGCGCCGCAANCTANGATCGAGTTTTTTTTTTTTTTTTTTT          TTTTTTGGGAGTAACAATGAGCTTTATTTTCATGTCACCGCTCTAGGTTCACTCACCTGT          TGCCAACAACATGAGGGAGTTTCTCCACAGCCCTTGATTCTGAATTGTTCAACAATCA          ACAGTCAACAATACATTGACTTAAGGAGTAAACAAGCAGCTTTTCTACACACCACCGG          GCACCCAGGAAGGCGCAGCTCCCTGCTCCACCCCGCCTCTTGGTGCCTGTATCCAGCA          GAAGGACCCAGCAGGAGGCTGAATCCAAGCACTGCTCTCAGGCCACTCTATCCTCATCCC          TGGATCCTCCAGGGAACAAGATAAAAAAAAAAAATCCTGTTTTCTGCTTTCCAAAATG          GAGGGCCTTAACATCAACCAAAGTTACCAAAACAAAACAAAACACAGGAGCTAGCTGGGC          GCGGTGGCTCACACCCGTGGTCCCAACATTTGGGAGACCAAGGTGGGAGGAATGCTTGA          GTTGTAGGAGTTCAAACAGCCTGGCAAATATGGCAAGACCCATCTCTTAAAAAGTAA          AAAAAATCAGCCGAGCATCATATCACATGCCTGTAGTCCCAGCTACTCTGGAGGCTGAG          ATGAAGACTGCTTGAGCCAGGGAGGGCAAGGCTGCCGTGAGCCAAGATCACACCACACA          CCTAGCCAGGGAGACAGCAAGACTCTCTCAAACAACAACCCAAAAAAAAAAAAAAAAA          AAAACCCACATCATCTGCAAAGCTATGTTGGGAGCACAGCCATTTCCCATAGGCTTTCTT          TTTCTTGGCCATTGCCTTCCGGGAAGTTTTCCCTTACCATCATCACGATTTTCCAT          CTTTACGATGGTGCAA</p>
<b>Restriction Sites:</b>	NotI-NotI
<b>ACCN:</b>	NM_145043
<b>Insert Size:</b>	2650 bp
<b>OTI Disclaimer:</b>	Our molecular clone sequence data has been matched to the reference identifier above as a point of reference. Note that the complete sequence of our molecular clones may differ from the sequence published for this corresponding reference, e.g., by representing an alternative RNA splicing form or single nucleotide polymorphism (SNP).
<b>Components:</b>	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\\_145043.1](#), [NP\\_659480.1](#)

**RefSeq Size:** 2661 bp

**RefSeq ORF:** 999 bp

**Locus ID:** 252969

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

**Cytogenetics:** 8p23.1

**Domains:** Fapy\_DNA\_glyco

**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]

Transcript Variant: This variant (1) represents the longest transcript and encodes the longest isoform (a). Variants 1, 2, and 8 encode the same isoform (a). Sequence Note: This RefSeq record was created from transcript and genomic sequence data to make the sequence consistent with the reference genome assembly. The genomic coordinates used for the transcript record were based on transcript alignments.