

## Product datasheet for **SC109875**

### UNG (NM\_080911) Human Untagged Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	UNG (NM_080911) Human Untagged Clone
Tag:	Tag Free
Symbol:	UNG
Synonyms:	DGU; HIGM4; HIGM5; UDG; UNG1; UNG2; UNG15
Mammalian Cell Selection:	None
Vector:	<u>pCMV6-XL5</u>
E. coli Selection:	Ampicillin (100 ug/mL)
Fully Sequenced ORF:	>NCBI ORF sequence for NM_080911, the custom clone sequence may differ by one or more nucleotides

```
ATGATCGGCCAGAAGACGCTCTACTCCTTTTTCTCCCCAGCCCCGCCAGGAAGCGACACGCCCCAGCC
CCGAGCCGGCCGTCCAGGGGACCGCGTGGCTGGGGTGCCTGAGGAAAGCGGAGATGCGGCGCCATCCC
AGCCAAGAAGGCCCGGCTGGGCAGGAGGAGCCTGGGACGCCGCCCTCCTCGCCGCTGAGTGCCGAGCAG
TTGGACCGGATCCAGAGGAACAAGGCCGCGGCCCTGCTCAGACTCGCGGCCCGCAACGTGCCCGTGGGCT
TTGGAGAGAGCTGGAAGAAGCACCTCAGCGGGGAGTTCGGGAAACCGTATTTTATCAAGCTAATGGGATT
TGTTGCAGAAGAAAGAAAGCATTACACTGTTTATCCACCCACACCAAGTCTTCACCTGGACCCAGATG
TGTGACATAAAAGATGTGAAGTTGTCATCCTGGGACAGGATCCATATCATGGACCTAATCAAGCTCAG
GGCTCTGCTTTAGTGTTCAAAGGCTGTCCGCCCTCCGCCAGTTGGAGAACATTTATAAAGAGTTGTC
TACAGACATAGAGGATTTTGTTCATCCTGGCCATGGAGATTTATCTGGTGGGCCAAGCAAGGTGTTCTC
CTTCTCAACGCTGTCTCACGGTTCGTGCCATCAAGCCAATCTCATAAGGAGCGAGGCTGGGAGCAGT
TCACTGATGCAGTTGTGCTGGCTAAATCAGAACTCGAATGGCCTTGTTTTCTTGCTCTGGGGCTCTTA
TGCTCAGAAGAAGGGCAGTGCCATTGATAGGAAGCGGCACCATGTACTACAGACGGCTCATCCCTCCCCT
TTGTCAGTGTATAGAGGGTCTTTGGATGTAGACACTTTTCAAAGACCAATGAGCTGTGCAGAAGTCTG
GCAAGAAGCCATTGACTGGAAGGAGCTGTGA
```



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**5' Read Nucleotide Sequence:**

>OriGene 5' read for NM\_080911 unedited  
 CATTTCGCGCTCGAGGCCACAGCGCGTTCTAGCCTCGCCGGTCCCGGGTGGCGCGCTT  
 CGCTGCCTCCTCAGTCCAGGATGATCGGCCAGAAGACGCTCTACTCCTTTTTTCTCCCC  
 AGCCCCGCCAGGAAGCGACACGCCCCAGCCCCGAGCCGGCCGTCCAGGGGACTCGCGTG  
 GCTGGGGTGCCTGAGGAAAGCTGAGATGCGGGCGCCATCCCAGCCAAGAAGGCCCGGT  
 GGGCAGGAGGAGCCTGGGACTCCGCCCTCTCGCCGTGAGTGCCGAGCAGTTGGACCGG  
 ATCCAGAGGAACAAGGCCGCGCCCTGCTCAGACTCGCGGCCCGCAACGTGCCCGTGGC  
 TTTGGAGAGAGCTGGAAGAAGCACCTCAGCGGGGAGTTCGGGAAACCGTATTTTATCAAG  
 CTAATGGGATTTGTTGCAGAAGACAGAAAGCATTACACTGTTTATCCACCCACACCAA  
 GTCTTCACCTGGACCCAGATGTGTGACATAAAAGATGTGAAGGTTGTCATCCTGGGACAG  
 GATCCATATCATGGACCTAATCAAGCTCACGGGCTCTGCTTTAGTGTTCAAAGGCCTGTT  
 CCGCCTCCGCCAGTTTGGACGAACATTATAAAGAGTTGTCTACAGACATAGAGGATTTT  
 GTTCATTCTGACCATGGAGATTTATCTGGGTGGGCCAGCAAAGTGTCTGCTTCTCAAC  
 GCTGTCTCACGGTTCGGGCCCTTCAAGCCCACTCCCATTAAGAGCGAGCGTGGGACCAG  
 TTCTGGAGCAGTTGTGTACCTGGCTAATCAGAACTTCGAGGCCCTTGTTTCTTGTCCG  
 GGGCTCTTATGCTCAAAAAGGCCGTGCCTTTGGTGGGAACGCGC

**3' Read Nucleotide Sequence:**

>OriGene 3' read for NM\_080911 unedited  
 AGTGTTCAAAATCCATTTAAGGCTCGCGTAAAACCACTTAACCCGNCTAAAGCAAAAAC  
 AGCATTGCTAACAAAGATCAAGGACGGAGGTGCAGACCCAATAAAGACCGTCTCTAAAAA  
 AAGGACTGGNGAAAAATATATATATATATCTGCATGAGTACTTCTAAAAAACTAAAA  
 CTTTCCAGTGTTGCAGGAAAAAATATTTTTTTGATTTTCAGTTCGGTAAAAAAAACAGTA  
 CTTGGCAGTCTGTGCTGCCTTAAAAACCCCAACTGGACATAACCCTAGGAGAAAAATCACC  
 CCACCCATAAAGACAAAATCCCTTTTCTCCTTCTTCTGTTCAAATCCACTGCTTAT  
 TCCACCAACACCCAAGGAATAACAAGACCCAGTTACTTCTCTCGGTCTCTTATCTGATA  
 AAGCTCACAGCAATCTTAACCTCTACTACAATCAGGAAATTGAGCCCTAATTTCTGGGCC  
 AGATTCTGGAAAGTTGCAAAACATCCTTATGCTGCGAGGGCCTGAGGACTCCTTCAAAG  
 ATCAAGGGGGCAGTGGAACTGGCAGAGACTGGCATGCCTGCCCTGCAGGCTGAGACAAGG  
 GACCTTTCTAAGCAAAAACCCAACATCTGTCACTGAAAGTCTAACCAGGCCAAACCAA  
 GGAGCAGCAGGCGCCCAACTAGGCTGTGCCCTGAAAGTGACATCTTCCCTGTTTCACAT  
 AAGGCCAGGGAGATAAAAAAGCCAAGTATTTGACCTCATCTGTCCTCTGGATATTT  
 TAAGCCCAAAACCTTGTGTCAGAAAAAGAACTTTGGTCAAAGGGTACCCTTGTGTTGG  
 GGTTGAAAACAAGTGCCTTTCCGGACAGCCTGGTTAATGGCTGCTTTCGGGAAACTTTTC  
 CCCTTTAGCCGAGACCTTAAAGATTAATAG

**Restriction Sites:**

NotI-NotI

**ACCN:**

NM\_080911

**Insert Size:**

2300 bp

**OTI Disclaimer:** Due to the inherent nature of this plasmid, standard methods to replicate additional amounts of DNA in E. coli are highly likely to result in mutations and/or rearrangements. Therefore, OriGene does not guarantee the capability to replicate this plasmid DNA. Additional amounts of DNA can be purchased from OriGene with batch-specific, full-sequence verification at a reduced cost. Please contact our customer care team at [custsupport@origene.com](mailto:custsupport@origene.com) or by calling 301.340.3188 option 3 for pricing and delivery.

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](#)

**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\\_080911.1](#), [NP\\_550433.1](#)

**RefSeq Size:** 2053 bp

**RefSeq ORF:** 942 bp

**Locus ID:** 7374

**UniProt ID:** [P13051](#)

**Cytogenetics:** 12q24.11

**Domains:** UDG

**Protein Families:** Druggable Genome, Stem cell - Pluripotency

**Protein Pathways:** Base excision repair, Primary immunodeficiency

**Gene Summary:**

This gene encodes one of several uracil-DNA glycosylases. One important function of uracil-DNA glycosylases is to prevent mutagenesis by eliminating uracil from DNA molecules by cleaving the N-glycosylic bond and initiating the base-excision repair (BER) pathway. Uracil bases occur from cytosine deamination or misincorporation of dUMP residues. Alternative promoter usage and splicing of this gene leads to two different isoforms: the mitochondrial UNG1 and the nuclear UNG2. The UNG2 term was used as a previous symbol for the CCNO gene (GeneID 10309), which has been confused with this gene, in the literature and some databases. [provided by RefSeq, Nov 2010]

Transcript Variant: This variant (2) uses an upstream promoter and an alternate splice site for exon 1B when compared to variant 1. It encodes the nuclear UNG2 isoform, which has a different N-terminal sequence than the UNG1 isoform.