

Product datasheet for **SC324192**

Thymine DNA glycosylase (TDG) (NM_003211) Human Untagged Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Thymine DNA glycosylase (TDG) (NM_003211) Human Untagged Clone
Tag:	Tag Free
Symbol:	Thymine DNA glycosylase
Synonyms:	hTDG
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC (PS100020)
E. coli Selection:	Ampicillin (100 ug/mL)

Fully Sequenced ORF: >OriGene sequence for NM_003211.3
GGGGACAGTAGAAGCCTGGAGGAGAGCTTGAGTCCAGCCACTGTCTGGGTACTGCCAG
CCATCGGGCCCAGTCTCTGGGGTTGTCTTACCGCAGTGAGTACCACGGGTTACTACAGA
GACCGGCTGCCCGTGTGCCCGGCAGGTGGAGCCGCCGATCAGCGGCCTCGGGGAATGG
AAGCGGAGAACGCGGGCAGCTATTCCCTTCAGCAAGCTCAAGCTTTTTATACGTTTCCAT
TTCAACAAGTGGCTGAAGCTCCTAATATGGCAGTTGTGAATGAACAGCAAATGCCAG
AAGAAGTTCAGCCCCAGCTCCTGCTCAGGAACCAAGAGGCTCCAAAAGGAAGAA
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TTAAAGTAAAAAGAAAGTAGACCGTTTTAATGGTGTTCAGAAGCTGAACCTCTGACCA
AGACTCTCCCGATATTTTACCTTCAATCTGGACATTGTCATTATTGGCATAAACCCGG
GACTAATGGCTGCTTACAAAGGGCATCATTACCCTGGACCTGGAAACATTTTTGGAAAGT
GTTTGTATGTGAGGGCTCAGTGAGGTCCAGCTGAACCATATGGATGATCACACTCTAC
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TTTTTGGAGTAAAGTTAAGAAGTGAATTTGGGCTTCAGCCCCATAAGATCCAGACA
CAGAACTCTCTGCTATGGTATGCCATCATCCAGTGAAGATGTGCTCAGTTTCTCGAG
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AGGATGCAAGAAGATGGCTGTTAAGGAAGAAAAATATGATCCAGGTTATGAGGCAGCAT
ATGGTGGTGTACGGAGAAAATCCATGCAGCAGTGAACCTTGTGGCTTCTCTCAAATG
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AGTGGATGACCCAGTCATTTACAGACCAAAATCCTTCTTTAGTAATCACTGTGGAACAC
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GCAGTTTTAATGCAGTTGTCAACAAGTAGAACCTCAGTTTGTAACTGAAGTGTTTTATT
AGTATTTACTCTAGTGGTGAATGTAAATGTAGAACAGTTGTGTGGTAGTGAACCGT



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ATGAACCTAAGTAGTTTGAAGAAAAAGTAGGGTTTTGTATACTAGCTTTTGTATTTGA
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TATATGCACACTCAGACCTCTTGGCTTTACCAGTGGTGTGTGAGTTGCTCAGTAGTAA
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CAAGAGATTGTTTTATTGAATGGGGAAAAATACCCTTTAAATTATGACGGACATCCACTA
GAGATGGGTTTGGAGTTTTCCAAGCGTGAATAATGATGTTTTTCTAACATGACAGAT
GAGTAGTAAATGTTGATATATCCTATAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA

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Restriction Sites:

ECoRI-NOT

ACCN:

NM_003211

OTI Disclaimer:

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).

OTI Annotation:

This TrueClone is provided through our Custom Cloning Process that includes sub-cloning into OriGene's pCMV6 vector and full sequencing to provide a non-variant match to the expected reference without frameshifts, and is delivered as lyophilized plasmid DNA.

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_003211.3](#), [NP_003202.3](#)

RefSeq Size: 3229 bp

RefSeq ORF: 1233 bp

Locus ID: 6996

UniProt ID: [Q13569](#)

Cytogenetics: 12q23.3

Domains: UDG

Protein Families: Druggable Genome

Protein Pathways: Base excision repair

Gene Summary: The protein encoded by this gene belongs to the TDG/mug DNA glycosylase family. Thymine-DNA glycosylase (TDG) removes thymine moieties from G/T mismatches by hydrolyzing the carbon-nitrogen bond between the sugar-phosphate backbone of DNA and the mispaired thymine. With lower activity, this enzyme also removes thymine from C/T and T/T mispairings. TDG can also remove uracil and 5-bromouracil from mispairings with guanine. This enzyme plays a central role in cellular defense against genetic mutation caused by the spontaneous deamination of 5-methylcytosine and cytosine. This gene may have a pseudogene in the p arm of chromosome 12. [provided by RefSeq, Jul 2008]