

Product datasheet for RC207113

Thymine DNA glycosylase (TDG) (NM_003211) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Thymine DNA glycosylase (TDG) (NM_003211) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	TDG
Synonyms:	hTDG
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
Cell Selection:	Neomycin
ORF Nucleotide Sequence:	>RC207113 ORF sequence Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCC**CGATCGCC**

ATGGAAGCGGAGAACGCGGGCAGCTATTCCTTCAGCAAGCTCAAGCTTTTTATACGTTTCCATTTCAAC
AACTGATGGCTGAAGCTCCTAATATGGCAGTTGTGAATGAACAGCAAATGCCAGAAGAAGTTCAGCCCC
AGCTCCTGCTCAGGAACCAAGTGAAGAGGCTCCAAAAGGAAGAAAAGAAAACCCAGAACAACAGAACCA
AAACAACCAAGTGAACCCAAAAACCTGTTGAGTCAAAAAATCTGGCAAGTCTGCAAAATCAAAAGAAA
AAACAAGAAAAATTACAGACACATTTAAAGTAAAAAGAAAAGTAGACCGTTTTAATGGTGTTCAGAAGC
TGAACCTCTGACCAAGACTCTCCCGATATTTGACCTCAATCTGGACATTGTCATTATTGGCATAAAC
CCGGGACTAATGGCTGCTTACAAAGGCATCATTACCCTGGACCTGGAACCATTTTTGGAAGTGTGTTGT
TTATGTCAGGGCTCAGTGAGGTCCAGCTGAACCATATGGATGATCACACTCTACCAGGGAAGTATGGTAT
TGGATTTACCAACATGGTGGAAAGGACCACGCCCGCAGCAAAGATCTCTCCAGTAAAGAATTTTCGTGAA
GGAGGACGTATTCTAGTACAGAAATTACAGAAATATCAGCCACGAATAGCAGTGTTAATGGAAAAATGTA
TTTATGAAATTTTTAGTAAAGAAGTTTTGGAGTAAAGTTAAGAACTTGAATTTGGGCTTCAGCCCCA
TAAGATTCAGACACAGAACTCTGCTATGGTATGCCATCATCCAGTGAAGATGTGCTCAGTTTCCCT
CGAGCCCAAGACAAAGTTCACTACTACATAAACTGAAGACTTAAGAGATCAGTTGAAAGGCATTGAAC
GAAATATGGACGTTCAAGAGGTGCAATATACATTTGACCTACAGCTTGCCCAAGAGGATGCAAAAGAGAT
GGCTGTTAAGGAAGAAAAATATGATCCAGGTTATGAGGCAGCATATGGTGGTGTCTACGGAGAAAAATCCA
TGCAGCAGTGAACCTTGTGGCTTCTCTTCAAATGGGCTAATTGAGAGCGTGGAGTTAAGAGGAGAATCAG
CTTTCAGTGGCATTCTAATGGGCAGTGGATGACCCAGTCATTTACAGACCAAATTCCTTCTTTAGTAA
TCACTGTGGAACACAAGAACAGGAAGAAGAAAGCCATGCT

ACGCGTACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
ACAAGGATGACGACGATAAGGTTTAA



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Protein Sequence: >RC207113 protein sequence
 Red=Cloning site Green=Tags(s)

MEAENAGSYSLQQAQAFYTFPFQQLMAEAPNMAVVNEQQMPPEEVPAPAPAQEPVQEAPKGRKRKPRTPTEP
 KQPVEPKKPVESKKSAGSKEKEQEKITDTFKVKRKYDRFNGVSEAELLTKTLPDILTFNLDIVIGIN
 PGLMAAYKGHHYPGPGNHFWKCLFMSGLSEVQLNHMDDHTLPGKYGIGFTNMVERTTPGSKDLSSEKERE
 GGRILVQKLQKYQPRIAVFNGKCIYEIFSKVEFVGVKKNLEFGLQPHKIPDETETLCYGMPPSSARCAQFP
 RAQDKVHYIYIKLKDLDLQKGIERNMDVQEVQYTFDLQLAQEDAKKMAVKEEKYDPGYEAYGGAYGENP
 CSSEPCGFSSNGLIESVELRGESAFSGIPNGQWMTQSF TDQIPSF SNHCGTQE QEEESH A

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

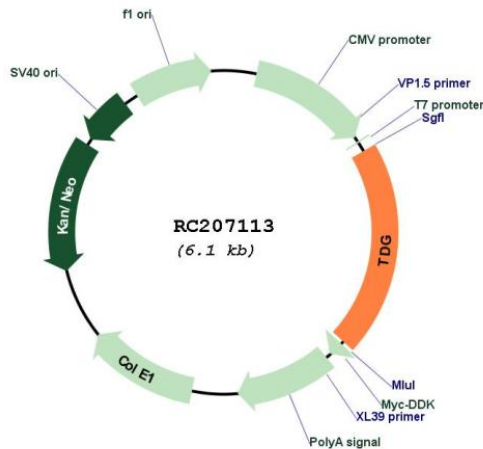
Chromatograms: https://cdn.origene.com/chromatograms/mk6020_b12.zip

Restriction Sites: SgfI-MluI

Cloning Scheme:

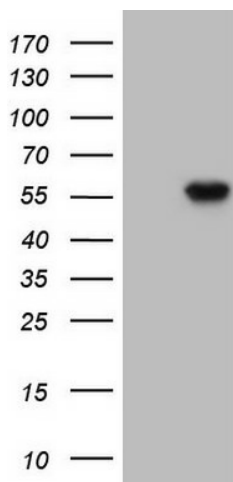


Plasmid Map:

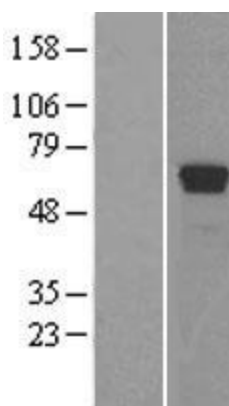


ACCN:	NM_003211
ORF Size:	1230 bp
OTI Disclaimer:	The molecular sequence of this clone aligns with the gene accession number as a point of reference only. However, individual transcript sequences of the same gene can differ through naturally occurring variations (e.g. polymorphisms), each with its own 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_003211.2
RefSeq Size:	3251 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
MW:	46 kDa
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]

Product images:



HEK293T cells were transfected with the pCMV6-ENTRY control (Cat# [PS100001], Left lane) or pCMV6-ENTRY TDG (Cat# RC207113, Right lane) cDNA for 48 hrs and lysed. Equivalent amounts of cell lysates (5 ug per lane) were separated by SDS-PAGE and immunoblotted with anti-TDG (Cat# [TA808610])(1:2000). Positive lysates [LY401109] (100ug) and [LC401109] (20ug) can be purchased separately from OriGene.



Western blot validation of overexpression lysate (Cat# [LY401109]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC207113 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).