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Product datasheet for MR206699

Tdg (NM_011561) Mouse Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Tdg (NM_011561) Mouse Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	Tdg
Synonyms:	E130317C12Rik; JZA-3; Jza1
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)

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ORF Nucleotide Sequence:

>MR206699 representing NM_011561
Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCCGCGATCGCC

ATGGACGCAGAGGCCGCGCGCAGCTATTCTCTGGAGCAAGTTCAAGCTTTGTATTCATTTCCATTTCAAC
AAATGATGGCAGAAGTTCCTAACATGGCAGTCACGACTGGACAGCAGGTGCCAGCAGTAGCTCCTAACAT
GGCAACCGTGACAGAACAGCAGGTGCCCGCAGACGCTCCTGTCCAGGAACCTGCACCAGAAGCTCCAAAG
AGAAGGAAAAGGAAACCCAGAGCAGCAGAGCCCCAGGAACCAGTGGAGCCCAAAAAACCTGCTACGTCGA
AGAAATCCGGCAAGTCTACAAAATCAAAGGAAAAGCAGGAGAAAATCACAGACGCGTTTAAAGTGAAAAG
GAAAGTGGACCGCTTCAACGGCGTCTCTGAAGCTGAGCTTCTGACCAAGACTCTTCCTGACATTTTGACC
TTCAATCTGGATATTGTGATCATTGGCATTAACCCGGGATTAATGGCTGCTTACAAAGGACATCACTACC
CTGGGCCTGGAAATCACTTCTGGAAGTGTCTGTTCATGTCGGGGCTGAGTGAGGTGCAGCTGAATCACAT
GGATGACCACACCTTACCCGGCAAGTACGGCATCGGATTCACCAACATGGTGGAACGGACGACGCCGGGC
AGCAAGGATCTGTCTAGTAAAGAGTTCCGGGAAGGAGGGCGCATCCTGGTGCAGAAACTGCAGAAATATC
AGCCACGAATAGCGGTGTTTAATGGAAAATGTATTTATGAAATTTTCAGTAAAGAAGTTTTTGGAGTAAA
GGTTAAGAACTTGGAATTTGGGCTTCAACCCCACAAGATCCCAGACACAGAAACTCTGTGCTACGTCATG
CCGTCGTCCAGCGCCAGATGTGCTCAGTTTCCCCGGGCCCAGGACAAAGTTCATTACTACATTAAGCTGA
AGGACTTGAGAGACCAGCTGAAAGGCATTGAACGCAACACCGACGTTCAGGAAGTGCAGTATACATTTGA
CCTGCAGCTTGCGCAAGAGGACGCAAAGAAGATGGCTGTTAAGGAAGAAAAGTATGATCCAGGCTATGAG
GCAGCTTACGGCGGCGCCTATGGGGAAAACCCATGTAATGGGGAACCTTGTGGCATTGCTTCAAATGGGC
TAACAGCCCACAGTGCGGAGCCGAGAGGAGAAGCGACCCCCGGCGATGTTCCAAATGGGCAGTGGATGGC
ACAGTCGTTTGCAGAGCAGATCCCTTCTTTTAATAATTGTGGGACCCGAGAGCAGGAAGAAGAGAGCCAC
GCT

AGCGGACCGACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCC
TGGATTACAAGGATGACGACGATAAGGTTTAA

Protein Sequence:

>MR206699 representing NM_011561
Red=Cloning site Green=Tags(s)

MDAEAARSYSLEQVQALYSFPFQQMMAEVPNMAVTTGQQVPAVAPNMATVTEQQVPADAPVQEPAPEAPK
RRKRKPRAAEPQEPVEPKKPATSKKSGKSTKSKEKQEKITDAFKVKRKVDRFNGVSEAELLTKTLPDILT
FNLDIVIIGINPGLMAAYKGHHYPGPGNHFWKCLFMSGLSEVQLNHMDDHTLPGKYGIGFTNMVERTTPG
SKDLSSKEFREGGRILVQKLQKYQPRIAVFNGKCIYEIFSKEVFGVKVKNLEFGLQPHKIPDTETLCYVM
PSSSARCAQFPRAQDKVHYYIKLKDLRDQLKGIERNTDVQEVQYTFDLQLAQEDAKKMAVKEEKYDPGYE
AAYGGAYGENPCNGEPCGIASNGLTAHSAEPRGEATPGDVPNGQWMAQSFAEQIPSFNNCGTREQEEESH
A

SGPTRTRRLEQKLISEEDLAANDILDYKDDDDKV

Restriction Sites: SgfI-RsrII

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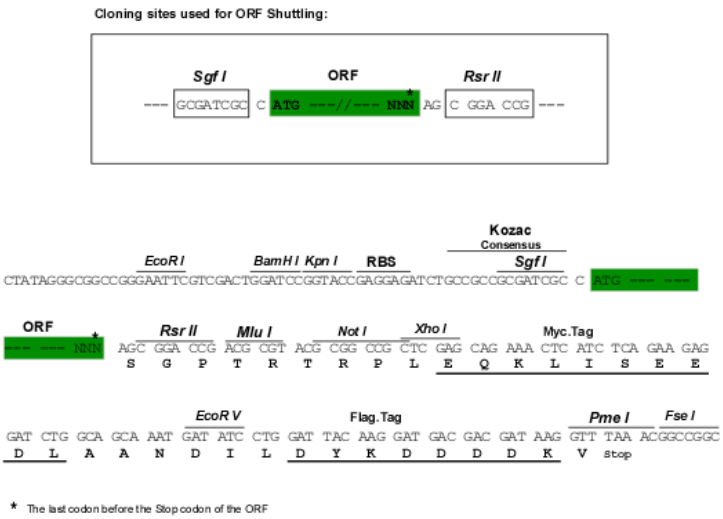
Cloning Scheme:



ACCN: NM_011561

ORF Size: 1263 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 Size: 3119 bp

RefSeq ORF: 1194 bp

Locus ID: 21665

UniProt ID: P56581

Cytogenetics: 10 39.72 cM

MW: 44.6 kDa

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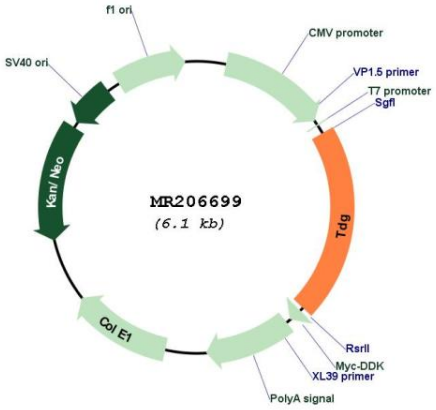
Gene Summary: DNA glycosylase that plays a key role in active DNA demethylation: specifically recognizes and binds 5-formylcytosine (5fC) and 5-carboxylcytosine (5caC) in the context of CpG sites and mediates their excision through base-excision repair (BER) to install an unmethylated cytosine (PubMed:21817016). Cannot remove 5-hydroxymethylcytosine (5hmC). According to an alternative model, involved in DNA demethylation by mediating DNA glycolase activity toward 5-hydroxymethyluracil (5hmU) produced by deamination of 5hmC (PubMed:21722948). Also involved in DNA repair by acting as a thymine-DNA glycosylase that mediates correction of G/T mispairs to G/C pairs: in the DNA of higher eukaryotes, hydrolytic deamination of 5-methylcytosine to thymine leads to the formation of G/T mismatches. Its role in the repair of canonical base damage is however minor compared to its role in DNA demethylation. It is capable of hydrolyzing the carbon-nitrogen bond between the sugar-phosphate backbone of the DNA and a mispaired thymine. In addition to the G/T, it can remove thymine also from C/T and T/T mispairs in the order G/T >> C/T > T/T. It has no detectable activity on apyrimidinic sites and does not catalyze the removal of thymine from A/T pairs or from single-stranded DNA. It can also remove uracil and 5-bromouracil from mispairs with guanine. [UniProtKB/Swiss-Prot Function]

Product images:



Circular map for MR206699

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