

Product datasheet for **MR225243**

Tdp2 (NM_019551) Mouse Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Tdp2 (NM_019551) Mouse Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	Tdp2
Synonyms:	D13Ertd656e; Ttrap
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
ORF Nucleotide Sequence:	>MR225243 ORF sequence Red=Cloning site Blue=ORF Green=Tags(s)

TTTGTAAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGATCGC**

ATGGCGTCTGGCAGCAGTTCGATGCGGCGGAGCCCGCAGGGCCGGCAGGGCGGGCGGCGTGGCGCCCCG
 AAGCAGCACAGGCGGAGGAGGACCGGTGAAGAGGCGCGGCTTCAGTGCCTGGGCTTTGCGTTGGTGGG
 GGGATGCGACCCACGATGGTCCCCAGCGTCCTGCGGGAACGACTGGCAGACGCAGAAAGCCCTGAGC
 GCCTACTTCGAGCTGCCAGAGAACGACCAAGGGTGGCCGCCAGCCTCCACGTCCTTCAAGTCCGAGG
 CCTATGTTGATCTAACCAACGAGGATGCAATGATACAACATTTAGAAGCCAGTCCATCTGGAAGTCC
 TCTAGAAGATAGCAGCACTATTTCTTTTACCTGGAATATTGATGGATTAGATGGATGCAATCTGCCC
 GAGAGGGCTCGAGGGGTGTGTTCTGCCTAGCTTTGTATAGTCCAGATGTGGTATTTCTACAGGAAGTTA
 TCCCCCATACTGTGCCTACCTAAAGAAGAGAGAGCCAGTTACACAATTATTACAGGTAATGAAGAAGG
 ATATTTACAGCTATACTATTGAAGAAAGGAAGAGTGAAATTTAAAGTCAGGAGATTATTCCTTTTCCA
 AATACCAAAATGATGAGAAACCTGCTATGCGTAAATGTGAGTTTGGGTGGAAATGAATTTGCCTTATGA
 CATCCCATTTGGAGAGCACCAGAGAACATTCTGCGGAACGAATAAGACAATTAAGAGATCAAGAAGTT
 AATGCAAGAGGCTCCAGATTCAACCACGGTTATATTTGCAGGAGATACAAATTTAAGAGATCAAGAAGTT
 ATCAAATGTGGTGGTTTACCTGACAACGTTTTTGTGCTGGGAATTTTAGGCAACCTAAACATTGCC
 AGTATACATGGGATACGAAAGCAAATAACAACCTCAGGATCCCTGCTGCTTATAAGCATCGTTTTGATCG
 AATATTTTTAGAGCAGAAGAGGGGCACCTTATTCCTCAAAGTTTAGACCTTGTGGGTTGGAAAACTG
 GACTGTGGTAGATTTCCGAGTGATCACTGGGGCTCTGTGCACCTGAATGTAGTATTG

ACGCGTACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
 ACAAGGATGACGACGATAAGGTTTAA


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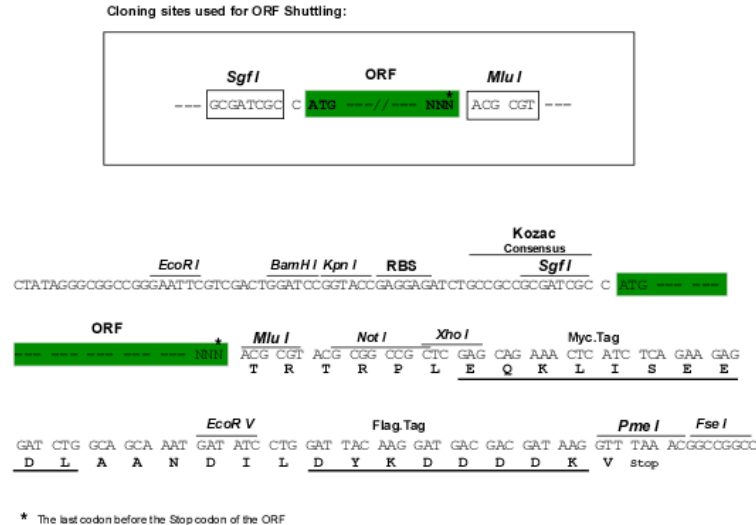
Protein Sequence: >MR225243 protein sequence
 Red=Cloning site Green=Tags(s)

MASGSSSDAAEPAGPAGRAASAPAAQAEEDRVKRRRLQCLGFALVGGCDPTMVPSVLRENDWQTQKALS
 AYFELPENDQGWPQPPTSFKSEAYVDLTNEDANDTTILEASPSGTPLEDSSTISFITWNIDGLDGCNLP
 ERARGVCSCLALYSPDVVFLQEVIPPYCAYLKKRAASYTIITGNEEGYFTAILKKGRVKFSQEIIIPFP
 NTKMMRNLLCVNLSLGGNEFCMTSHLESTREHSAERIRQLKTVLGKMQEAPDSTTVIFAGDTNLRDQEV
 IKCGGLPDNVFDAWEFLGKPKHCQYTWDTKANNLRIPAAYKHRFDRIFFRAEEGHLIPQSLDLVGLEKL
 DCGRFPSDHWGLLCTLNVL

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Restriction Sites: SgfI-MluI

Cloning Scheme:



ACCN: NM_019551

ORF Size: 1110 bp

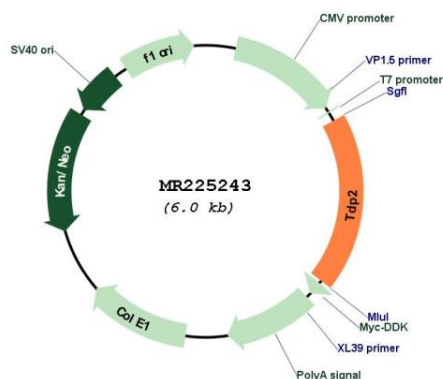
OTI Disclaimer: The molecular sequence of this clone aligns with the gene accession number as a point of reference only. However, individual transcript sequences of the same gene can differ through naturally occurring variations (e.g. polymorphisms), each with its own valid existence. This clone is substantially 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.
Note:	Plasmids are not sterile. For experiments where strict sterility is required, filtration with 0.22um filter is required.
RefSeq:	<u>NM_019551.2, NP_062424.1</u>
RefSeq Size:	1977 bp
RefSeq ORF:	1113 bp
Locus ID:	56196
UniProt ID:	<u>Q9JIX7</u>
Cytogenetics:	13 10.7 cM
MW:	41 kDa
Gene Summary:	<p>DNA repair enzyme that can remove a variety of covalent adducts from DNA through hydrolysis of a 5'-phosphodiester bond, giving rise to DNA with a free 5' phosphate. Catalyzes the hydrolysis of dead-end complexes between DNA and the topoisomerase 2 (TOP2) active site tyrosine residue. The 5'-tyrosyl DNA phosphodiesterase activity can enable the repair of TOP2-induced DNA double-strand breaks/DSBs without the need for nuclease activity, creating a 'clean' DSB with 5'-phosphate termini that are ready for ligation (PubMed:23104055, PubMed:24808172, PubMed:27099339, PubMed:27060144). Thereby, protects the transcription of many genes involved in neurological development and maintenance from the abortive activity of TOP2 (PubMed:22740648). Hydrolyzes 5'-phosphoglycolates on protruding 5' ends on DSBs due to DNA damage by radiation and free radicals. Has preference for single-stranded DNA or duplex DNA with a 4 base pair overhang as substrate. Has also 3'-tyrosyl DNA phosphodiesterase activity, but less efficiently and much slower than TDP1. Constitutes the major if not only 5'-tyrosyl-DNA phosphodiesterase in cells. Also acts as an adapter by participating in the specific activation of MAP3K7/TAK1 in response to TGF-beta: associates with components of the TGF-beta receptor-TRAF6-TAK1 signaling module and promotes their ubiquitination dependent complex formation. Involved in non-canonical TGF-beta induced signaling routes. May also act as a negative regulator of ETS1 and may inhibit NF-kappa-B activation. Acts as a regulator of ribosome biogenesis following stress (By similarity).[UniProtKB/Swiss-Prot Function]</p>

Product images:



Circular map for MR225243