

Product datasheet for MC210026

Tdp2 (NM_019551) Mouse Untagged Clone

Product data:

Product Type: Expression Plasmids
Product Name: Tdp2 (NM_019551) Mouse Untagged Clone
Tag: Tag Free
Symbol: Tdp2
Synonyms: D13Erttd656e; Ttrap
Vector: pCMV6-Entry (PS100001)
E. coli Selection: Kanamycin (25 ug/mL)
Cell Selection: Neomycin
Fully Sequenced ORF: >MC210026 representing NM_019551
 Red=Cloning site Blue=ORF Orange=Stop codon

TTTTGTAATACGACTCACTATAGGGCGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**GCGATCGCC**

ATGGCGTCTGGCAGCAGTCCGATGCGGGGAGCCCGAGGGCCGGCAGGGCGGGCGGCGTTCGGCGCCCG
 AAGCAGCACAGGGCGGAGGAGGACCGGGTGAAGAGGCGGGCGGCTTCAGTGCCTGGGCTTTGCGTTGGTGGG
 GGGATGCGACCCACGATGGTCCCAGCGTCTGCGGGAGAACGACTGGCAGACGCAGAAAGCCCTGAGC
 GCCTACTTCGAGCTGCCAGAGAACGACCAAGGGTGGCCGCGCCAGCCTCCACGTCTTCAAGTCCGAGG
 CCTATGTTGATCTAACCAACGAGGATGCAAATGATACAACCATTTTGAAGCCAGTCCATCTGGAATCC
 TCTAGAAGATAGCAGCACTATTTCTTTCATTACCTGGAATATTGATGGATTAGATGGATGCAATCTGCC
 GAGAGGGCTCGAGGGGTGTTCCTGCCTAGCTTTGTATAGTCCAGATGTGGTATTTCTACAGGAAGTTA
 TCCCCCATACTGTGCCTACCTAAAGAAGAGAGCAGCCAGTTACACAATTATTACAGGTAATGAAGAAGG
 ATATTTACAGCTATACTATTGAAGAAAGGAAGAGTGAATTTAAAAGTCAGGAGATTATCCTTTTCCA
 AATACCAAAATGATGAGAAACCTGCTATGCGTAAATGTGAGTTTGGGTGGAATGAATTTTGCCTTATGA
 CATCCCATTGGAGAGCACCAGAGAACATTCTGCGGAACGAATAAGACAATTAATAAACTGTTCTTGGAAA
 AATGCAAGAGGCTCCAGATTCAACCACGGTTATATTTGCAAGGAGATACAATTTAAGAGATCAAGAAGTT
 ATCAAATGTGGTGGTTTACCTGACAACGTTTTTGTGATGCCTGGGAATTTTTAGGCAAACCTAACATTGCC
 AGTATACATGGGATACGAAAGCAAATAACAACCTCAGGATCCCTGCTGCTTATAAGCATGTTTTGATCG
 AATATTTTTAGAGCAGAAGAGGGGCACCTTATTCCTCAAAGTTTAGACCTTGTGGGTTGGAAAACTG
 GACTGTGGTAGATTTCCGAGTGATCACTGGGGCTCTTGTGCACCTTGAATGTAGATTG**TGA**

ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
 ACAAGGATGACGACGATAAGGTTTAA

Restriction Sites: SgfI-MluI
ACCN: NM_019551



Insert Size:	1113 bp
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).
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:	<u>NM_019551.2</u> , <u>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
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>