

Product datasheet for **MR225243L3V**

Tdp2 (NM_019551) Mouse Tagged ORF Clone Lentiviral Particle

Product data:

Product Type:	Lentiviral Particles
Product Name:	Tdp2 (NM_019551) Mouse Tagged ORF Clone Lentiviral Particle
Symbol:	Tdp2
Synonyms:	D13Ertd656e; Ttrap
Mammalian Cell Selection:	Puromycin
Vector:	pLenti-C-Myc-DDK-P2A-Puro (PS100092)
Tag:	Myc-DDK
ACCN:	NM_019551
ORF Size:	1113 bp
ORF Nucleotide Sequence:	The ORF insert of this clone is exactly the same as(MR225243).
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.
RefSeq:	NM_019551.2 , NP_062424.1
RefSeq Size:	1977 bp
RefSeq ORF:	1113 bp
Locus ID:	56196
UniProt ID:	Q9JIX7
Cytogenetics:	13 10.7 cM



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Gene Summary:

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]