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Product datasheet for TP525243

Tdp2 (NM_019551) Mouse Recombinant Protein

Product data:

Product Type:	Recombinant Proteins
Description:	Purified recombinant protein of Mouse tyrosyl-DNA phosphodiesterase 2 (Tdp2), with C-terminal MYC/DDK tag, expressed in HEK293T cells, 20ug
Species:	Mouse
Expression Host:	HEK293T
Expression cDNA Clone or AA Sequence:	>MR225243 protein sequence Red=Cloning site Green=Tags(s) MASGSSSDAAEPAGPAGRAASAPEAAQAEEDRVKRRRLQCLGFALVGGCDPTMVPSVLRENDWQTQKALS AYFELPENDQGWPRQPPTSFKSEAYVDLTNEDANDTTILEASPSGTPLEDSSTISFITWNIDGLDGCNLP ERARGVCSCLALYSPDVVFLQEVIPPYCAYLKKRAASYTIITGNEEGYFTAILLKKGRVKFKSQEIIPFP NTKMMRNLLCVNVSLGGNEFCLMTSHLESTREHSAERIRQLKTVLGKMQEAPDSTTVIFAGDTNLRDQEV IKCGGLPDNVFDAWEFLGKPKHCQYTWDTKANNNLRIPAAYKHRFDRIFFRAEEGHLIPQSLDLVGLEKL DCGRFPSDHWGLLCTLNVVL TRTRPLEQKLISEEDLAANDILDYKDDDDKV
Tag:	C-MYC/DDK
Predicted MW:	41 kDa
Concentration:	>0.05 µg/µL as determined by microplate BCA method
Purity:	> 80% as determined by SDS-PAGE and Coomassie blue staining
Buffer:	25 mM Tris-HCl, 100 mM glycine, pH 7.3, 10% glycerol
Note:	For testing in cell culture applications, please filter before use. Note that you may experience some loss of protein during the filtration process.
Storage:	Store at -80°C after receiving vials.
Stability:	Stable for 12 months from the date of receipt of the product under proper storage and handling conditions. Avoid repeated freeze-thaw cycles.
RefSeq:	NP_062424
Locus ID:	56196
UniProt ID:	Q9JJX7

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RefSeq Size:	1977
Cytogenetics:	13 10.7 cM
RefSeq ORF:	1113
Synonyms:	D13Ertd656e; Ttrap
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]