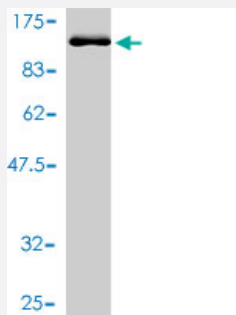


TDP1 polyclonal antibody (A01)

Catalog # H00055775-A01

Size 50 uL

Applications



Western Blot detection against Immunogen (92.99 KDa) .

Specification

Product Description	Mouse polyclonal antibody raised against a full-length recombinant TDP1.
Immunogen	TDP1 (AAH15474.1, 1 a.a. ~ 608 a.a) full-length recombinant protein with GST tag.
Sequence	MSQEGDYGRWTISSDSESEEEKPKPDKPSTSSLLCARQGAANEPRTCSEAQKAAHKRKISPVK FSNTDSVLPPKRQKSGSQEDLGWCLSSSDDELQPEMPQKQAEKVVIKKEKDISAPNDGTAQRT ENHGAPACHRLKEEEDYEYTSGEGQDIWMDLKGPNPFQFYLTRVSGVKPKYNSGALHIKDILSPL FGTLVSSAQFNCFDVDWLVKQYPPEFRKKPILLVHGDKREKAHLHAQAKPYENISLCQAKLDIA FGTHHTKMMLLLYEEGLRVVIHTSNLIHADWHQKTQGWLSPLYPRIADGTHKSGESPTHFKADLIS YLMAYNAPSLKEWIDVIHKHDLSETNVYLIGSTPGRFQGSQKDNWGHFRLKLLKDHASSMPNAE SWPVVGQFSSVGSGLGADESKWLCSEFKESMLTLGKESKTPGKSSVPLYLYPSVENVRTSLEGY PAGGSLPYSIQTAEKQNWLSYFHKWSAETSGRSNAMPHIKTYMRPSPDFSKIAWFLVTSANLSK AAWGALEKNGTQLMIRSYELGVFLPSAFGLDSFKVKQKFFAGSQEPMATFPVPYDLPELYGS KDRPWIIWNPYVKAPDTHGNMWVPS
Host	Mouse
Reactivity	Human
Interspecies Antigen Sequence	Mouse (81); Rat (82)
Quality Control Testing	Antibody Reactive Against Recombinant Protein. Western Blot detection against Immunogen (92.99 KDa) .
Storage Buffer	50 % glycerol

Storage Instruction

Store at -20°C or lower. Aliquot to avoid repeated freezing and thawing.

Applications

- Western Blot (Recombinant protein)

[Protocol Download](#)

- ELISA

Gene Info — TDP1

Entrez GeneID [55775](#)**GeneBank Accession#** [BC015474](#)**Protein Accession#** [AAH15474.1](#)**Gene Name** TDP1**Gene Alias** FLJ11090, MGC104252**Gene Description** tyrosyl-DNA phosphodiesterase 1**Omim ID** [607198](#) [607250](#)**Gene Ontology** [Hyperlink](#)**Gene Summary**

The protein encoded by this gene is involved in repairing stalled topoisomerase I-DNA complexes by catalyzing the hydrolysis of the phosphodiester bond between the tyrosine residue of topoisomerase I and the 3-prime phosphate of DNA. This protein may also remove glycolate from single-stranded DNA containing 3-prime phosphoglycolate, suggesting a role in repair of free-radical mediated DNA double-strand breaks. This gene is a member of the phospholipase D family and contains two PLD phosphodiesterase domains. Mutations in this gene are associated with the disease spinocerebellar ataxia with axonal neuropathy (SCAN1). While several transcript variants may exist for this gene, the full-length nature of only two have been described to date. These two represent the major variants of this gene and encode the same isoform. [provided by RefSeq]

Other Designations

-

Publication Reference

- [Dual Processing of R-Loops and Topoisomerase I Induces Transcription-Dependent DNA Double-Strand Breaks.](#)

Cristini A, Ricci G, Britton S, Salimbeni S, Huang SN, Marinello J, Calsou P, Pommier Y, Favre G, Capranico G, Gromak N, Sordet O.

Cell Reports 2019 Sep; 28(12):3167.

Application: WB-Tr, Human, HCT-116 cells

- [TDP1 suppresses mis-joining of radiomimetic DNA double-strand breaks and cooperates with Artemis to promote optimal nonhomologous end joining.](#)

Kawale AS, Akopiants K, Valerie K, Ruis B, Hendrickson EA, Huang SN, Pommier Y, Povirk LF.

Nucleic Acids Research 2018 Sep; 46(17):8926.

Application: IF, WB, Human, HEK 293 cells

- [Aberrant topoisomerase-1 DNA lesions are pathogenic in neurodegenerative genome instability syndromes.](#)

Katyal S, Lee Y, Nitiss KC, Downing SM, Li Y, Shimada M, Zhao J, Russell HR, Petrini JH, Nitiss JL, McKinnon PJ.

Nature Neuroscience 2014 Jun; 17(6):813.

Application: WB-Ti, Mouse, Cerebella, Brain

- [PARP1-TDP1 coupling for the repair of topoisomerase I-induced DNA damage.](#)

Das BB, Huang SY, Murai J, Rehman I, Ame JC, Sengupta S, Das SK, Majumdar P, Zhang H, Biard D, Majumder HK, Schreiber V, Pommier Y.

Nucleic Acids Research 2014 Apr; 42(7):4435.

Application: WB-Ce, WB-Tr, Human, HCT116, HeLa cells

- [Optimal function of the DNA repair enzyme TDP1 requires its phosphorylation by ATM and/or DNA-PK.](#)

Das BB, Antony S, Gupta S, Dexheimer TS, Redon CE, Garfield S, Shiloh Y, Pommier Y.

The EMBO Journal 2009 Oct; 28(23):3667.

Application: WB, Human, Human A-T fibroblast, HCT-116, MDA-MB-231 cells

- [In vitro complementation of Tdp1 deficiency indicates a stabilized enzyme-DNA adduct from tyrosyl but not glycolate lesions as a consequence of the SCAN1 mutation.](#)

Hawkins AJ, Subler MA, Akopiants K, Wiley JL, Taylor SM, Rice AC, Windle JJ, Valerie K, Povirk LF.

DNA Repair 2009 May; 8(5):654.

Application: WB-Ce, Mouse, MEFs

- [TDP1 facilitates chromosomal single-strand break repair in neurons and is neuroprotective in vivo.](#)

Katyal S, el-Khamisy SF, Russell HR, Li Y, Ju L, Caldecott KW, McKinnon PJ.

The EMBO Journal 2007 Oct; 26(22):4720.

Application: WB-Ti, Mouse, Mouse cortex, cerebellum, spleen

Disease

- [Breast cancer](#)
- [Colorectal Neoplasms](#)
- [Disease Progression](#)
- [Genetic Predisposition to Disease](#)
- [Meningeal Neoplasms](#)
- [Meningioma](#)
- [Neoplasms](#)
- [Neutropenia](#)
- [Werner syndrome](#)