

**EAPII Antibody (C-term) Blocking peptide**  
**Synthetic peptide**  
**Catalog # BP11233b****Specification**

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**EAPII Antibody (C-term) Blocking peptide - Product Information**Primary Accession [O95551](#)**EAPII Antibody (C-term) Blocking peptide - Additional Information****Gene ID** 51567**Other Names**

Tyrosyl-DNA phosphodiesterase 2, Tyr-DNA phosphodiesterase 2, hTDP2, 314-, 5'-tyrosyl-DNA phosphodiesterase, 5'-Tyr-DNA phosphodiesterase, ETS1-associated protein 2, ETS1-associated protein II, EAPII, TRAF and TNF receptor-associated protein, Tyrosyl-RNA phosphodiesterase, VPg unlinkase, TDP2, EAP2, TTRAP

**Format**

Peptides are lyophilized in a solid powder format. Peptides can be reconstituted in solution using the appropriate buffer as needed.

**Storage**

Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C.

**Precautions**

This product is for research use only. Not for use in diagnostic or therapeutic procedures.

**EAPII Antibody (C-term) Blocking peptide - Protein Information****Name** TDP2 {ECO:0000303|PubMed:27060144}**Function**

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:<a href="http://www.uniprot.org/citations/27099339" target="\_blank">27099339</a>, PubMed:<a href="http://www.uniprot.org/citations/27060144" target="\_blank">27060144</a>). Thereby, protects the transcription of many genes involved in neurological development and maintenance from the abortive activity of TOP2. 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. Acts as a regulator of ribosome biogenesis following stress. 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.

**Cellular Location**

Nucleus. Nucleus, PML body Nucleus, nucleolus. Cytoplasm Note=Localizes to nucleolar cavities following stress; localization to nucleolus is dependent on PML protein.

**Tissue Location**

Widely expressed (PubMed:10764746). Highly expressed in various brain regions, including the frontal and occipital lobes, the hippocampus, the striatum and the cerebellum (PubMed:24658003).

**EAPII Antibody (C-term) Blocking peptide - Protocols**

Provided below are standard protocols that you may find useful for product applications.

- [Blocking Peptides](#)

**EAPII Antibody (C-term) Blocking peptide - Images****EAPII Antibody (C-term) Blocking peptide - Background**

This gene encodes a member of a superfamily of divalentcation-dependent phosphodiesterases. The encoded protein associateswith CD40, tumor necrosis factor (TNF) receptor-75 and TNF receptorassociated factors (TRAFs), and inhibits nuclear factor-kappa-Bactivation. This protein has sequence and structural similaritieswith APE1 endonuclease, which is involved in both DNA repair andthe activation of transcription factors.

**EAPII Antibody (C-term) Blocking peptide - References**

Shimada, M., et al. Hum. Genet. 128(4):433-441(2010)Wang, B.Y., et al. Mol. Biol. Rep. 37(6):2809-2816(2010)Iijima, M., et al. Neurology 73(17):1348-1352(2009)Cortes Ledesma, F., et al. Nature 461(7264):674-678(2009)Zhang, J.Q., et al. Biochem. Biophys. Res. Commun. 387(2):256-260(2009)