

## Product datasheet for **AP06727PU-N**

### Thymine DNA glycosylase (TDG) Rabbit Polyclonal Antibody

#### Product data:

Product Type:	Primary Antibodies
Applications:	IF, IHC, WB
Recommended Dilution:	<b>Western blot:</b> 1/500-1/1000. <b>Immunofluorescence:</b> 1/50-1/200. <b>Immunohistochemistry on Paraffin Sections:</b> 1/50-1/200.
Reactivity:	Human, Mouse, Rat
Host:	Rabbit
Clonality:	Polyclonal
Immunogen:	Synthetic peptide, corresponding to amino acids 28-109 of Human TDG.
Specificity:	This antibody detects endogenous levels of TDG rotein. (region surrounding Lys90)
Formulation:	Phosphate buffered saline (PBS), pH~7.2 State: Aff - Purified State: Liquid purified Ig fraction (> 95% pure by SDS-PAGE). Preservative: 0.05% Sodium Azide
Concentration:	1.0 mg/ml
Purification:	Affinity Chromatography using epitope-specific immunogen.
Conjugation:	Unconjugated
Storage:	Store undiluted at 2-8°C for one month or (in aliquots) at -20°C for longer. Avoid repeated freezing and thawing.
Stability:	Shelf life: one year from despatch.
Predicted Protein Size:	~46 kDa
Gene Name:	thymine DNA glycosylase
Database Link:	<a href="#">Entrez Gene 6996 Human Q13569</a>



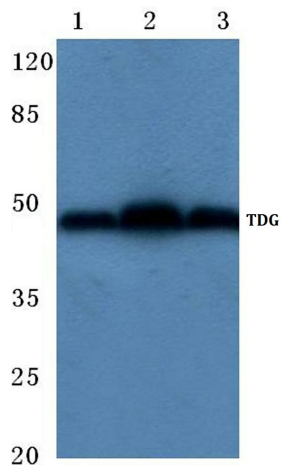
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**Background:**

In the DNA of higher eukaryotes, hydrolytic deamination of 5-methylcytosine to thymine leads to the formation of G/T mismatches. G/T mismatch-specific Thymine DNA Glycosylase (TDG) is a nuclear protein which corrects G/T mismatches to G/C pairs by hydrolyzing the carbon-nitrogen bond between the sugar-phosphate backbone of the DNA and the mispaired thymine. TDG also corrects a subset of G/U mispairs inefficiently removed by the more abundant uracil glycosylases. Retinoic acid receptors interact physically and functionally with TDG, enhancing the ability of the retinoid X receptor and the retinoid X receptor/retinoid acid receptor complex to bind to their response elements. TDG interacts with, and is covalently modified by, the ubiquitin-like proteins SUMO-1 and SUMO-2/3, resulting in a reduction of the DNA substrate and AP site binding affinity of TDG. This sumoylation is associated with a significant increase in enzymatic turnover in reactions with a G/U substrate and the loss of G/T processing activity.

**Synonyms:**

E130317C12Rik; hTDG; JZA-3; Jza1; OTTMUSP00000028912; OTTMUSP00000028913

**Product images:**

Western blot (WB) analysis of TDG antibody at 1/500 dilution Lane 1:HeLa whole cell lysate Lane 2:Mouse lung tissue lysate