

# Human TDG antibody

Catalog Number: ATGA0251

## PRODUCT INFORMATION

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**Catalog number**

ATGA0251

**Clone No.**

AT2F7

**Product type**

Monoclonal Antibody

**UnitProt No.**

Q13569

**NCBI Accession No.**

AAH37557

**Alternative Names**

Thymine-DNA glycosylase, G/T mismatch-specific thymine DNA glycosylase,

## PRODUCT SPECIFICATION

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**Antibody Host**

Mouse

**Reacts With**

Human

**Concentration**

1mg/ml (determined by BCA assay)

**Formulation**

Liquid in. Phosphate-Buffered Saline (pH 7.4) with 0.02% Sodium Azide, 10% glycerol

**Immunogen**

Recombinant human TDG (1-410aa) purified from E. coli

**Isotype**

IgG1 kappa

**Purification Note**

By protein-A affinity chromatography

**Application**

ELISA,WB,ICC/IF

**Usage**

The antibody has been tested by ELISA, Western blot analysis to assure specificity and reactivity. Since application varies, however, each investigation should be titrated by the reagent to obtain optimal results. Recommended starting dilution is 1:250.

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## Storage

Can be stored at +2C to +8C for 1 week. For long term storage, aliquot and store at -20C to -80C. Avoid repeated freezing and thawing cycles.

## BACKGROUND

### Description

G/T mismatch-specific thymine DNA glycosylase is an enzyme that in humans is encoded by the TDG gene. Several bacterial proteins have strong sequence homology with this protein. The protein encoded by this gene belongs to the TDG/mug DNA glycosylase family. Thymine-DNA glycosylase (TDG) removes thymine moieties from G/T mismatches by hydrolyzing the carbon-nitrogen bond between the sugar-phosphate backbone of DNA and the mispaired thymine. With lower activity, this enzyme also removes thymine from C/T and T/T mispairings. TDG can also remove uracil and 5-bromouracil from mispairings with guanine. This enzyme plays a central role in cellular defense against genetic mutation caused by the spontaneous deamination of 5-methylcytosine and cytosine. This gene may have a pseudogene in the p arm of chromosome 12.

### General References

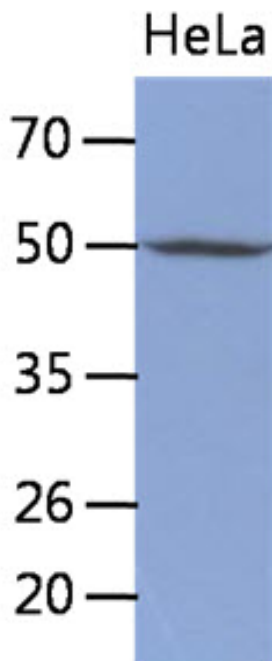
Neddermann, P., et al. (1996) J Biol Chem 271(22): 12767-74

Sard, L., et al. (1997) Genomics 44(2): 222-6

Gallinari, P., et al. (1996) Nature 383(6602): 735-8

## DATA

### Western blot analysis (WB)

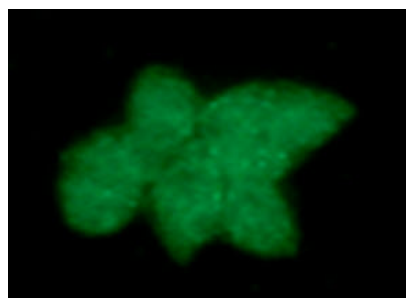


The cell lysates of HeLa (30ug) were resolved by SDS-PAGE, transferred to PVDF membrane and probed with anti-human TDG antibody (1:250). Proteins were visualized using a goat anti-mouse secondary antibody conjugated to HRP and an ECL detection system.

### Immunocytochemistry/Immunofluorescence (ICC/IF)

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ICC/IF analysis of TDG in 293T cells line, stained with DAPI (Blue) for nucleus staining and monoclonal anti-human TDG antibody (1:100) with goat anti-mouse IgG-Alexa fluor 488 conjugate (Green).

