Human TDG antibody

Catalog Number: ATGA0251

PRODUCT INFORMATION

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

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

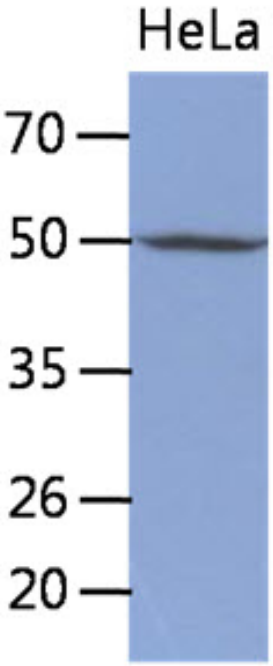
G/T mismatch-specific thymine DNA glycosylase is an enzyme that in humans is encoded by the TDG gene. Several bacterial proteins have strong sequence homology with this protein. The protein encoded by this gene belongs to the TDG/mug DNA glycosylase family. Thymine-DNA glycosylase (TDG) removes thymine 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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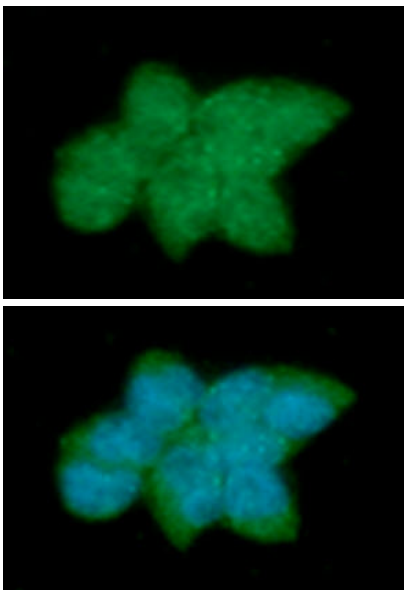

ICC/IF analysis of TDG in 293T cells line, stained with DAPI (Blue) for nucleus staining and monoclonal anti-human TDG antibody (1:100) with goat anti-mouse IgG-Alexa fluor 488 conjugate (Green).