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Anti-Thymine DNA Glycosylase Antibody
Catalog # AP53780

Specification

Anti-Thymine DNA Glycosylase Antibody - Product Information

Application	**WB, IF**
Primary Accession	Q13569
Reactivity	**Human, Mouse, Rat**
Host	**Rabbit**
Clonality	**Polyclonal**
Calculated MW	**46053**

Anti-Thymine DNA Glycosylase Antibody - Additional Information

Gene ID 6996

Other Names
G/T mismatch-specific thymine DNA glycosylase; Thymine-DNA glycosylase; hTDG

Target/Specificity
Recognizes endogenous levels of Thymine DNA Glycosylase protein.

Dilution
WB~~1/500 - 1/1000
IF~~1/50 - 1/200

Format
Liquid in 0.42% Potassium phosphate, 0.87% Sodium chloride, pH 7.3, 30% glycerol, and 0.09% (W/V) sodium azide.

Storage
Store at -20 °C.Stable for 12 months from date of receipt

Anti-Thymine DNA Glycosylase Antibody - Protein Information

Name TDG

Function
DNA glycosylase that plays a key role in active DNA demethylation: specifically recognizes and binds 5-formylcytosine (5fC) and 5-carboxylcytosine (5caC) in the context of CpG sites and mediates their excision through base-excision repair (BER) to install an unmethylated cytosine. Cannot remove 5-hydroxymethylcytosine (5hmC). According to an alternative model, involved in DNA demethylation by mediating DNA glycolase activity toward 5-hydroxymethyluracil (5hmU) produced by deamination of 5hmC. Also involved in DNA repair by acting as a thymine-DNA glycosylase that mediates correction of G/T mispairs to G/C pairs: in the DNA of higher eukaryotes, hydrolytic deamination of 5-methylcytosine to thymine leads to the formation of G/T mismatches. Its role in the repair of canonical base damage is however minor compared to its role in DNA demethylation. It is capable of hydrolyzing the carbon-nitrogen bond between the

sugar-phosphate backbone of the DNA and a mispaired thymine. In addition to the G/T, it can remove thymine also from C/T and T/T mispairs in the order G/T >> C/T > T/T. It has no detectable activity on apyrimidinic sites and does not catalyze the removal of thymine from A/T pairs or from single- stranded DNA. It can also remove uracil and 5-bromouracil from mispairs with guanine.

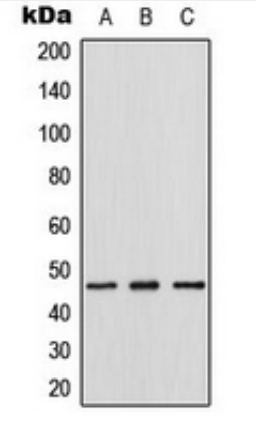
Cellular Location
Nucleus.

Anti-Thymine DNA Glycosylase Antibody - Protocols

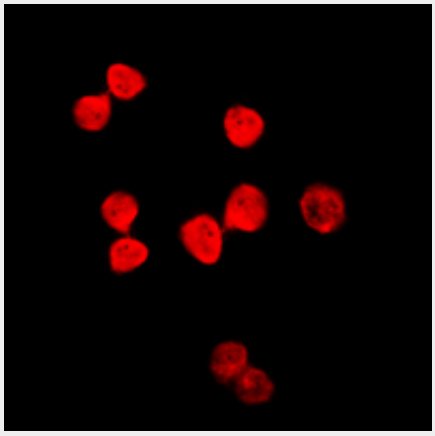
Provided below are standard protocols that you may find useful for product applications.

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

Anti-Thymine DNA Glycosylase Antibody - Images



Western blot analysis of Thymine DNA Glycosylase expression in HeLa (A), mouse lung (B), rat lung (C) whole cell lysates.



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Immunofluorescent analysis of Thymine DNA Glycosylase staining in HeLa cells. Formalin-fixed cells were permeabilized with 0.1% Triton X-100 in TBS for 5-10 minutes and blocked with 3% BSA-PBS for 30 minutes at room temperature. Cells were probed with the primary antibody in 3% BSA-PBS and incubated overnight at 4 °C in a humidified chamber. Cells were washed with PBST and incubated with a DyLight 594-conjugated secondary antibody (red) in PBS at room temperature in the dark.

Anti-Thymine DNA Glycosylase Antibody - Background

Rabbit polyclonal antibody to Thymine DNA Glycosylase