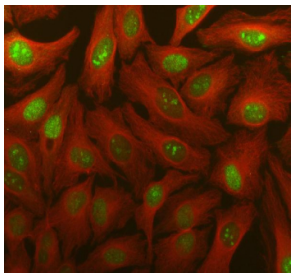
TDG Antibody / Thymine-DNA glycosylase (RQ7493)

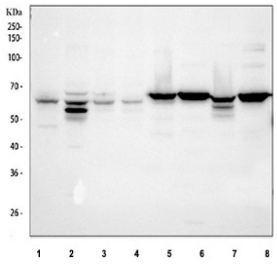
Catalog No.	Formulation	Size
RQ7493	0.5mg/ml if reconstituted with 0.2ml sterile DI water	100 ug

Bulk quote request

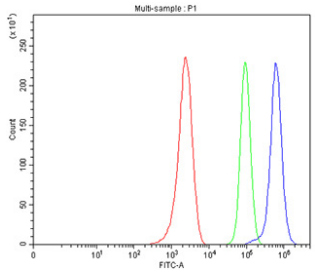
Availability	1-3 business days
Species Reactivity	Human, Mouse, Rat
Format	Antigen affinity purified
Clonality	Polyclonal (rabbit origin)
Isotype	Rabbit IgG
Purity	Antigen affinity purified
Buffer	Lyophilized from 1X PBS with 2% Trehalose
UniProt	Q13569
Localization	Nuclear
Applications	Western Blot : 0.5-1ug/ml Flow Cytometry : 1-3ug/million cells Direct ELISA : 0.1-0.5ug/ml Immunofluorescence : 5ug/ml
Limitations	This TDG antibody is available for research use only.



Immunofluorescent staining of FFPE human HeLa cells with TDG antibody (green) and Alpha Tubulin mAb (red). HIER: steam section in pH6 citrate buffer for 20 min.



Western blot testing of 1) human 293T, 2) human MCF7, 3) human K562, 4) human SH-SY5Y, 5) rat thymus, 6) rat brain, 7) mouse thymus and 8) mouse brain tissue lysate with TDG antibody. Predicted molecular weight ~46 kDa but may be observed at higher molecular weights due to ubiquitination and sumoylation.



Flow cytometry testing of fixed and permeabilized human MCF7 cells with TDG antibody at 1ug/million cells (blocked with goat sera); Red=cells alone, Green=isotype control, Blue= TDG antibody.

Description

Thymine-DNA glycosylase (TDG) is a key enzyme in the base excision repair pathway, responsible for recognizing and excising mismatched thymine or uracil residues paired with guanine. By initiating DNA repair, TDG maintains genomic stability and prevents mutagenesis caused by spontaneous deamination or oxidative damage. Research using a TDG antibody helps explore its role in DNA repair and transcriptional regulation.

Beyond repair, TDG also interacts with transcription factors and chromatin-modifying complexes, influencing gene regulation and epigenetic processes. It has been linked to active DNA demethylation through the removal of oxidized methylcytosine intermediates, highlighting its importance in epigenetic control. Using a TDG antibody in studies aids in characterizing these regulatory mechanisms.

TDG has implications in cancer biology, as alterations in its activity may contribute to tumorigenesis by affecting genome integrity and gene expression patterns. A TDG antibody is valuable for assays such as western blot, immunohistochemistry, and chromatin studies. NSJ Bioreagents provides high-quality reagents to support TDG-related research.

Application Notes

Optimal dilution of the TDG antibody should be determined by the researcher.

Immunogen

E. coli-derived recombinant human protein (amino acids Q15-R370) was used as the immunogen for the TDG antibody.

Storage

After reconstitution, the TDG antibody can be stored for up to one month at 4oC. For long-term, aliquot and store at -20oC. Avoid repeated freezing and thawing.