diagenode
A Hologic Company

TECHNICAL DATASHEET

TDG recombinant protein

Other names: HTDG

Cat. No. C23020101
Source: SF9 cells
Lot #: 001
Size: 10 µg/ 20 µl
Concentration: 0.5 µg/µl
Specificity: Mouse

Purity: Purified using FPLC, >95% purity as determined by SDS-PAGE.
Storage buffer: 20 mM Tris-Cl pH 7.6, 1 mM EDTA, 0.15 M NaCl, 10% glycerol, 0.5 mM PMSF and 1 mM DTT.
Storage: Store at -80°C; guaranteed stable for 2 years from date of receipt when stored properly.
Precautions: This product is for research use only. Not for use in diagnostic or therapeutic procedures.

Description: Active full length recombinant mouse N-terminal His tagged TDG (Thymine-DNA Glycosylase) protein, produced in SF9 insect cells.

Protein description

TDG (UniProt/Swiss-Prot entry Q13569) belongs to the TDG/mug DNA glycosylase family. It removes thymine moieties from G/T mismatches by hydrolyzing the carbon-nitrogen bond between the sugar-phosphate backbone of DNA and the mispaired thymine. It is also able to remove thymine from C/T and T/T mispairings, although with lower activity. Furrther, TDG plays a key role in active DNA demethylation as it binds to 5-formylcytosine (5fC) and 5-carboxylcytosine (5caC), but not 5-hydroxymethylcytosine (5hmC), and mediates their excision through base-excision repair (BER) to install an unmethylated cytosine.

Quality control

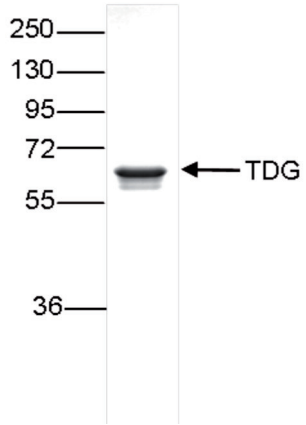

Figure 1.

SDS page of the TDG recombinant protein. The position of the protein of interest is indicated on the right; the marker (in kDa) is shown on the left.

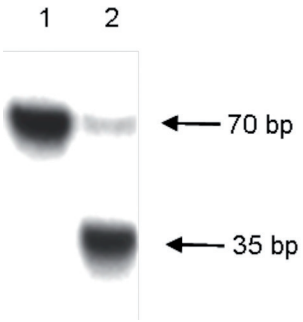

Figure 2.

TDG activity assay. A 70 bp DNA fragment (50 ng) containing a G/T mismatch was incubated with the TDG recombinant protein (lane 2) for 30 min at 37°C and analyzed on a denaturing polyacrylamide gel. In the presence of TDG a 35 bp fragment is generated. A negative control (no addition of TDG) is shown in lane 1.

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