

Product datasheet for **KN317363BN**

Tdg Mouse Gene Knockout Kit (CRISPR)

Product data:

Product Type:	Knockout Kits (CRISPR)
Format:	2 gRNA vectors, 1 mBFP-Neo donor, 1 scramble control
Donor DNA:	mBFP-Neo
Symbol:	Tdg
Locus ID:	21665
Components:	KN317363G1, Tdg gRNA vector 1 in pCas-Guide CRISPR vector (GE100002) KN317363G2, Tdg gRNA vector 2 in pCas-Guide CRISPR vector (GE100002) KN317363BND, donor DNA containing left and right homologous arms and mBFP-Neo functional cassette. GE100003, scramble sequence in pCas-Guide vector
RefSeq:	NM_011561 , NM_172552 , NM_001358517
UniProt ID:	P56581
Synonyms:	E130317C12Rik; JZA-3; Jza1
Summary:	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 (PubMed:21817016). 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 (PubMed:21722948). Also involved in DNA repair by acting as a thymine-DNA glycosylase that mediates correction of G/T mismatches 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 mismatches 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 mismatches with guanine.[UniProtKB/Swiss-Prot Function]



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Product images:

