

Product datasheet for KN317363LP

Tdg Mouse Gene Knockout Kit (CRISPR)

Product data:

OriGene Technologies, Inc.

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Product Type:	Knockout Kits (CRISPR)
Format:	2 gRNA vectors, 1 Luciferase-Puro donor, 1 scramble control
Donor DNA:	Luciferase-Puro
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) KN317363LPD, donor DNA containing left and right homologous arms and Luciferase-Puro functional cassette. GE100003, scramble sequence in pCas-Guide vector
Disclaimer:	These products are manufactured and supplied by OriGene under license from ERS. The kit is designed based on the best knowledge of CRISPR technology. The system has been functionally validated for knocking-in the cassette downstream the native promoter. The efficiency of the knock-out varies due to the nature of the biology and the complexity of the experimental process.
RefSeq:	<u>NM 011561, NM 172552, NM 001358517</u>
UniProt ID:	<u>P56581</u>
Synonyms:	E130317C12Rik; JZA-3; Jza1

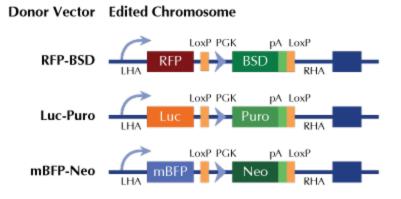


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GRIGENE Tdg Mouse Gene Knockout Kit (CRISPR) – KN317363LP

DNA glycosylase that plays a key role in active DNA demethylation: specifically recognizes and Summary: 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 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 sugarphosphate 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.[UniProtKB/Swiss-Prot Function]

Product images:



RFP, Luc, and mBFP will be under native gene promoter

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