

Product datasheet for KN317423LP

OriGene Technologies, Inc.

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Tet2 Mouse Gene Knockout Kit (CRISPR)

Product data:

Product Type: Knockout Kits (CRISPR)

Format: 2 gRNA vectors, 1 Luciferase-Puro donor, 1 scramble control

Donor DNA: Luciferase-Puro

Symbol: Tet2

Locus ID: 214133

Components: KN317423G1, Tet2 gRNA vector 1 in pCas-Guide CRISPR vector (GE100002)

KN317423G2, Tet2 gRNA vector 2 in pCas-Guide CRISPR vector (GE100002)

KN317423LPD, donor DNA containing left and right homologous arms and Luciferase-Puro

functional cassette.

GE100003, scramble sequence in pCas-Guide vector

RefSeq: <u>NM 001040400, NM 001346736, NM 145989</u>

UniProt ID: Q4|K59

Synonyms: Ayu17-449; E130014J05Rik; mKIAA1546

Summary: Dioxygenase that catalyzes the conversion of the modified genomic base 5-methylcytosine

(5mC) into 5-hydroxymethylcytosine (5hmC) and plays a key role in active DNA

demethylation. Has a preference for 5-hydroxymethylcytosine in CpG motifs. Also mediates subsequent conversion of 5hmC into 5-formylcytosine (5fC), and conversion of 5fC to 5-carboxylcytosine (5caC). Conversion of 5mC into 5hmC, 5fC and 5caC probably constitutes the first step in cytosine demethylation. Methylation at the C5 position of cytosine bases is an epigenetic modification of the mammalian genome which plays an important role in transcriptional regulation. In addition to its role in DNA demethylation, also involved in the

recruitment of the O-GlcNAc transferase OGT to CpG-rich transcription start sites of active genes, thereby promoting histone H2B GlcNAcylation by OGT.[UniProtKB/Swiss-Prot

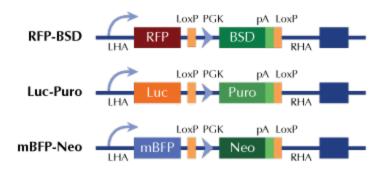
Function]





Product images:

Donor Vector Edited Chromosome



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