transEDIT™ CRISPR-Cas Reagents

Optimized gRNA designs, versatile vectors and flexible formats for efficient gene editing

transEDIT CRISPR-Cas Reagents
Enabling Discovery Across the Genome

transOMIC technologies

www.transomic.com

transEDIT™ CRISPR-Cas9 Reagents

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transEDIT CRISPR-Cas9 lentiviral reagents provide powerful tools for genome editing, offering optimized gRNA designs cloned into a choice of expression vectors and formats for engineering specific gene knockouts.

transEDIT reagents include lentiviral expression vectors containing specific gRNA targeting your gene of interest in various formats:

(1) Single or paired gRNA plus Cas9 in an all-in-one configuration
(2) Single or paired gRNA expression vectors for co-delivery with a Cas-9 nuclease or nickase expression vector.

Cas9 nuclease and nickase expression vectors are available with different selectable markers and fluorescent reporters for efficient selection.

- **Single or paired guide RNA CRISPR strategies for gene editing**
- **All-in-one or single guide RNA delivery - including inducible Cas9**
- **Multiple vectors to enable dual or triple selection for enhanced efficiency**

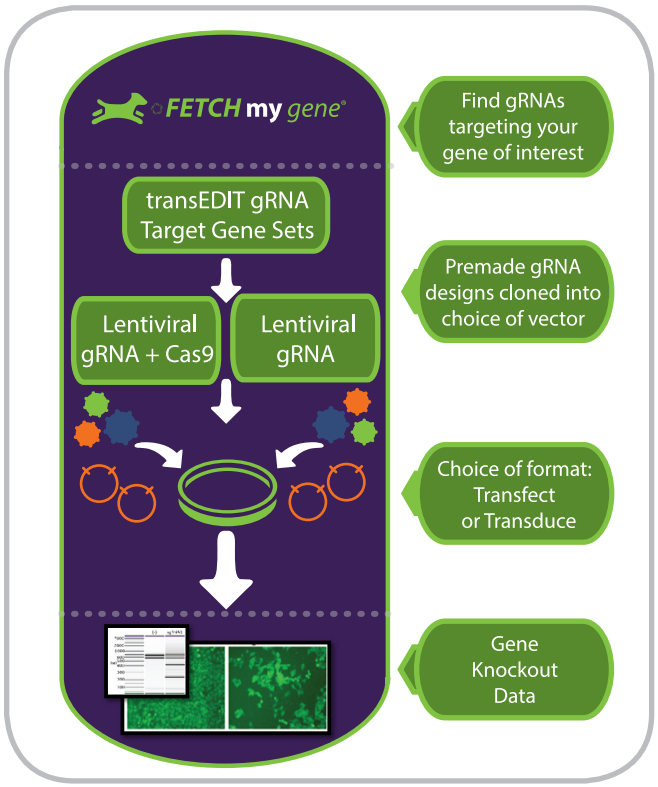

Figure 1. Schematic showing transEDIT CRISPR Cas9 for easy gene editing

transEDIT vector options for optimal guide RNA and Cas9 Expression and Selection

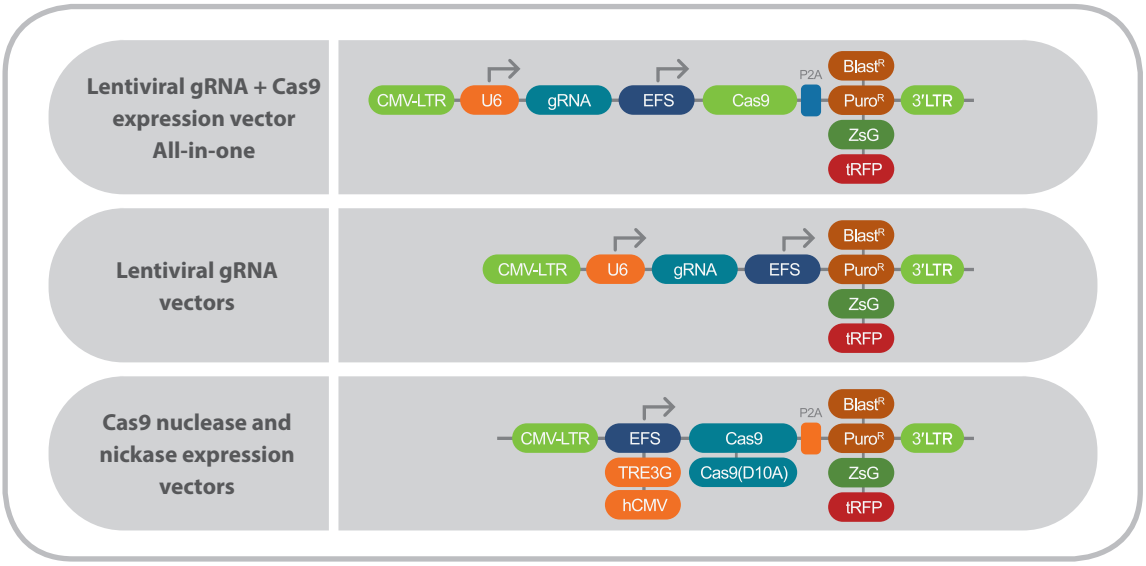

Figure 2: Lentiviral expression vectors for guide RNA and Cas9 showing different promoter, reporter and selectable marker options

Detecting targeted double-stranded breaks in DNA

transEDIT™ lentiviral gRNA and Cas9 all-in-one expression vectors targeting DYRK1A and TP53 were transduced at low copy in HEK293T cells and surveyor assay used to detect percentage of indel frequency.

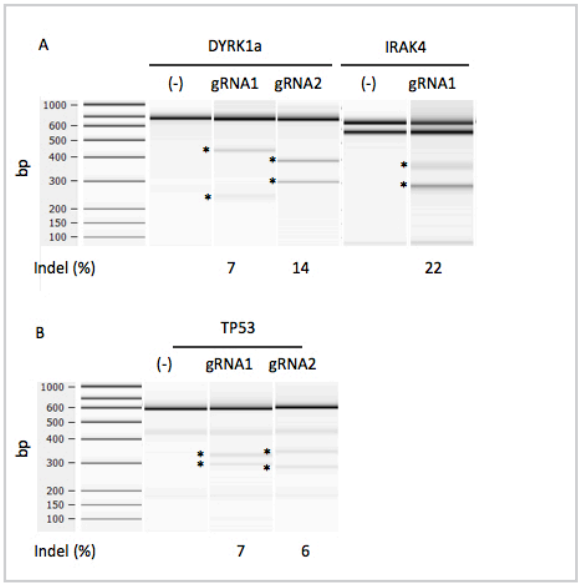

*Figure 3. Surveyor assay for indel frequency analysis. A. HEK293T cells transduced with pCLIP-All targeting DYRK1A and IRAK4 B. Cas9 expressing HEK293T cells transduced with pCLIP-All targeting tp53. (*indicated expected fragment sizes)*

Selection Provides Greater Genome Editing Efficiency

The level of Cas9 endonuclease expression has been shown to affect the frequency of generating genome-edited clones. Vector delivery and expression are critical determinants of genome editing efficiency. The ability to select for cells with high Cas9 expression results in a higher indel frequency in the population. All transEDIT Cas9 expression vectors include selection markers for enrichment.

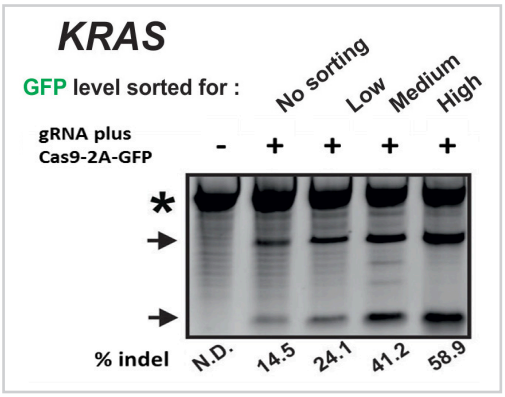

Figure 4. Fluorescent marker linked to Cas9 expression enables the selection of cells with high indel frequency. GFP expression was directly linked to Cas9 expression via P2A peptide. FACS was used to bin cells into low medium and high expression of the fluorescent marker. Indel frequency was measured using the CEL-I Surveyor assay and the percentages are shown at the bottom of each lane. Cells enriched for the highest fluorescence expression showed the highest indel frequency. Adapted from Nucleic Acids Res. 2014;42(10):e84.

How to order

Simple - visit www.transomic.com - insert your gene symbol, gene ID or accession for your gene of interest into FETCH my gene search tool, select CRISPR tab on the results tab to view the standard target gene sets available.

Flexible - select the standard vector and format of your choice for your species of interest. Need more than the standard option? Fill out the request form for additional vector, promoter, selection markers and formats for single, paired nickase.

Fast - receive your ready-to-use transEDIT CRISPR-Cas target gene set to quickly start your gene editing experiment.

Lentiviral gRNA and Cas9 available as viral particles

Contact info@transomic.com to ask about custom cloning gRNAs and generating lentiviral vector particles

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