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Product datasheet for GE100078

p-xCas9-Guide CRISPR Vector

Product data:

Product Type: CRISPR Vectors

Function: All-in-One CRISPR/Cas9 vectors

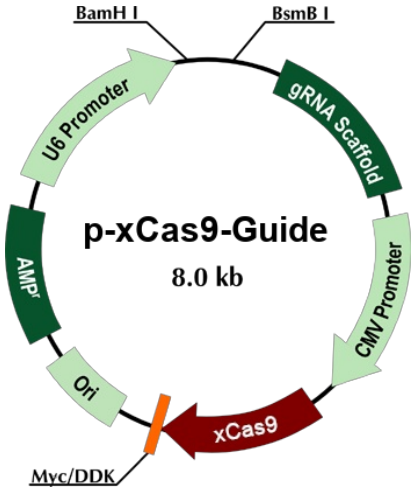
Features:

- All-in-one vector

1. Expresses human codon-optimized xCas9
2. BamH I and BsmB I can be used for genomic target sequence cloning
3. Expresses gRNA containing the inserted target sequence and the gRNA scaffold

Disclaimer: These products are manufactured and supplied by OriGene under license from ERS.

Product images:



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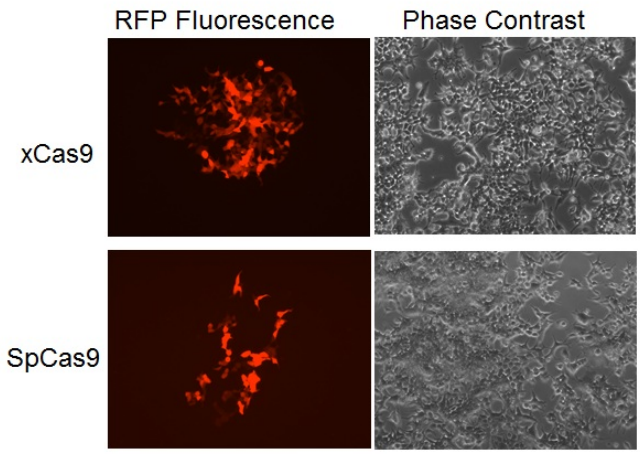
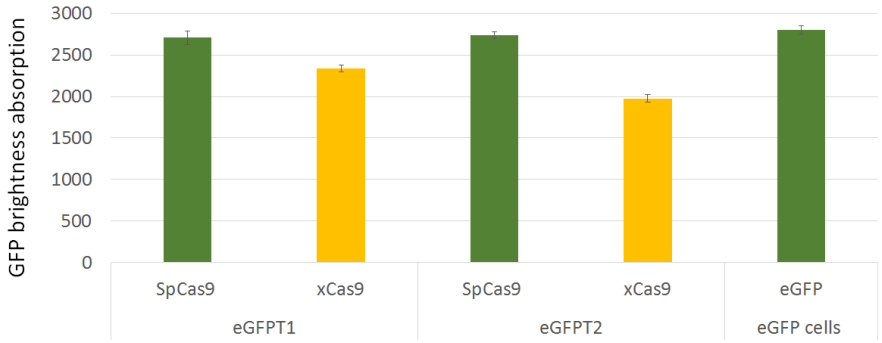
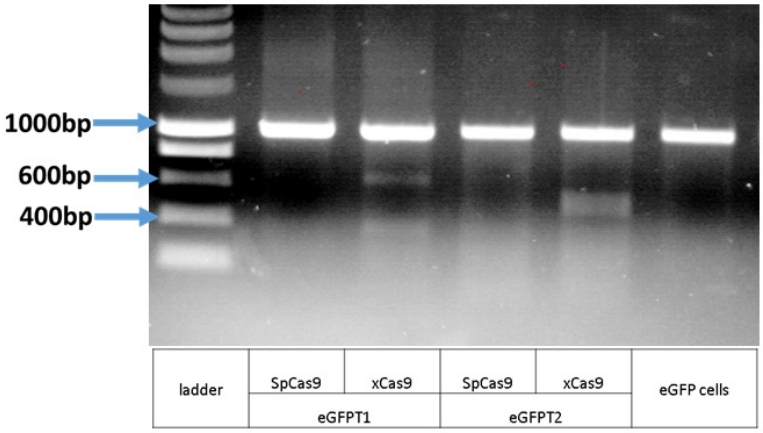


Genomic editing of RFP deletion was performed using wild type RFP sequence (oligo donor), and verified gRNA plasmid. The gRNA sequence was designed based on NGG PAM sequence, and cloned in the xCas9 (Cat#GE100078) or SpCas9 (Cat#[GE100002]) vector. The parent cell used for the gene editing contains a RFP expression cassette which has a big deletion in the coding sequence. 0.5ug of gRNA plasmid and 0.5ug RFP repairing oligo were co-transfected in the RFP negative parent cells. 10 days after transfection, RFP fluorescence can be observed (Left panel) in both xCas9 and SpCas9 transfected cells. However, xCas9 (Top) seems to have a higher editing efficiency than SpCas9 (bottom).



Genomic editing with xCas9 and GGT PAM gRNA sequence. Two GGT PAM gRNAs (eGFPT1 and eGFPT2) were designed based on eGFP sequence, and cloned in the Spcas9 (Cat#[GE100002]) and xCas9 (Cat#GE100078) vector, respectively. The gRNA plasmids were transfected in the HEK293T cells stably expressing eGFP protein. 5 days after transfection, measure the eGFP signal under microscope. SpCas9 can't cut the eGFP sequence and have no change of brightness after transfection. But xCas9 show reduced GFP signal in both gRNA transfected cells.



DNA cleavage using SpCas9 or xCas9 and GGT PAM gRNA sequences. Two GGT PAM gRNAs (eGFPT1 and eGFPT2) were designed based on eGFP sequence, and cloned in the Spcas9 (Cat#[GE100002]) and xCas9 (Cat#GE100078) vector, respectively. The gRNA plasmids were transfected in the HEK293T cells stably expressing eGFP protein. 5 days after transfection, genomic DNAs were extracted from the cells, and DNA cleavage analysis was done using T7 endonuclease assay.