

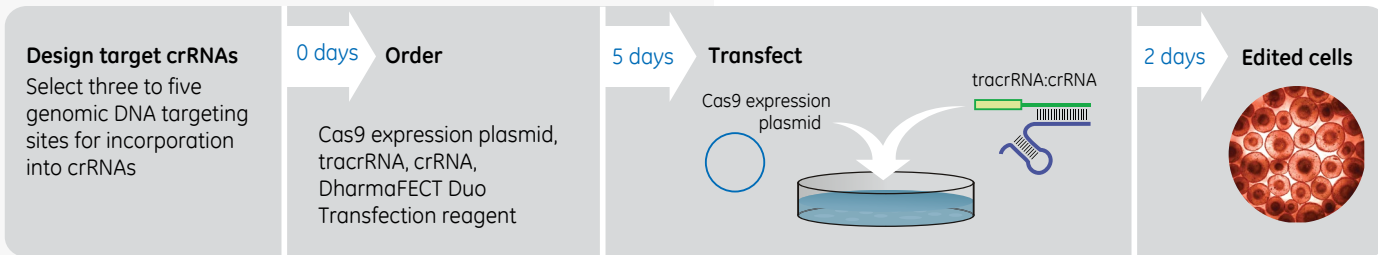
## Dharmacon™ Edit-R™ Gene Engineering System

The Edit-R CRISPR-Cas9 platform greatly simplifies the workflow of permanently knocking out genes by eliminating the time-consuming cloning of individual guide RNA expression vectors. Our novel approach includes transfection-ready, endotoxin-free DNA and RNA components and enables fast assessment of multiple target sites per gene, for multiple genes.

[gelifesciences.com/dharmacon](http://gelifesciences.com/dharmacon)

# When you need that gene knocked out next week, not next month.





The Edit-R CRISPR-Cas9 platform includes the three critical components required for permanent gene disruption in mammalian cells, based on the natural *S. pyogenes* system:

1. a plasmid expressing a mammalian codon-optimized gene sequence encoding Cas9 nuclease,
2. a long, chemically synthesized trans-activating CRISPR RNA (tracrRNA), and
3. a chemically synthesized CRISPR RNA (crRNA) designed to cleave the gene target site of interest

All three components are co-transfected into the mammalian cell of choice using the DharmaFECT™ Duo Transfection Reagent to perform gene knockout.

The Edit-R Gene Engineering system eliminates the need for individually cloning guide RNAs and saves you time better spent on your experiment!

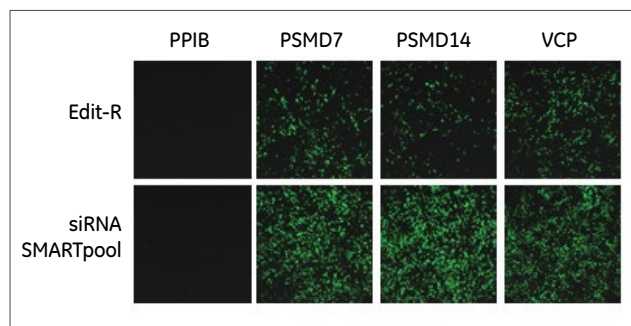


Figure: Edit-R was used to perform targeted gene editing on confirmed hits from a siRNA screen performed in U2OS cells. The readout was a Ubi[G76V]-EGFP redistribution assay to examine proteasome inhibition as a result of alteration to gene activity; an increase in GFP expression above background indicates a reduction in proteasome function. In the top row cells were treated with the Cas9 Nuclease Expression Plasmid and 100 nM tracrRNA/crRNA targeting PPIB (negative control gene target), PSMD7, PSMD14, or VCP (proteasome components). In the bottom row cells were transfected with 100 nM gene-targeting siRNA pools. Images were taken 72 hours post-transfection.

Description	Cat. #
Cas9 Nuclease Expression Plasmid	U-001000-120
Synthetic tracrRNA	U-002000-120
Custom Synthetic crRNA	crRNA-XXXXXX
mKate2 Transfection Optimization Plasmid	U-003000-120
DharmaFECT Duo Transfection Reagent	T-2010-0X
<b>Edit-R Gene Engineering Kit</b> (includes synthetic tracrRNA, Cas9 Nuclease Expression and mKate2 Transfection plasmids)	U-009000-120



GE, imagination at work and GE monogram are trademarks of General Electric Company. Dharmacon is a trademark of GE Healthcare companies. ©2014 General Electric Company—All rights reserved. First published September 2014. GE Healthcare UK Limited, Amersham Place, Little Chalfont, Buckinghamshire, HP7 9NA, UK

Orders can be placed at:  
gelifesciences.com/dharmacon

Customer Support: cs.dharmacon@ge.com  
Technical Support: ts.dharmacon@ge.com or  
1.800.235.9880; 303.604.9499 if you have any questions.

[gelifesciences.com/dharmacon](http://gelifesciences.com/dharmacon)

