



Accurately Assess Cas9 Activity in Cells

- Measure functional activity of Cas9 nuclease, dCas9-repressor, or dCas9-activator in any cell line
- Obtain quantitative FACS-based read-outs
- Get complete kits with ready-to-transduce lentiviral particles

The CRISPR-Test assay kits contain a mix of lentiviral particles with both green fluorescent and red fluorescent protein (GFP and RFP). The GFP fluorescent marker responds to the specific Cas9 activity the Kit measures, whether nuclease (CRISPRu or CRISPR KO), gene repression (CRISPRi), or gene activation (CRISPRa), while the RFP fluorescence provides a normalization control.

How Does it Work?

Cellecta offers several kits to measure different Cas9 variants using either of two different mechanisms. Our **Fluorescent-Reporter CRISPR-Test™ Assays** directly knock out, knock down, or induce a GFP reporter gene. Whereas our **Essential-Gene CRISPRtest™ Cas9 Assays** knock out an essential endogenous gene required for viability, which leads to loss of cells with the fluorescent marker.

The general procedure for both the Reporter and Essential Gene assays is similar as follows:

1. Transduce your test population of putative Cas9, or dCas9-activator, or dCas9-repressor cells.
2. Determine by flow the ratio of green to red fluorescent cells.
3. After 4-6 days, measure the ratio of green to red fluorescent cells again.
4. Cas9 activity correlates with the difference in green vs. red cells.

Measure Cas9 for CRISPR, CRISPRa, or CRISPRi

CRISPRuTest™ Fluorescent Reporter Cas9 Nuclease Assay Kit (cat. # CRUTEST) —Measure Cas9 nuclease activity in any mammalian cell system.

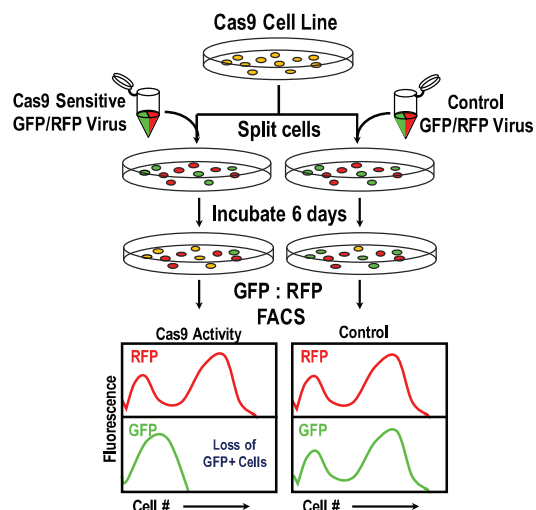
CRISPRaTest™ Fluorescent Reporter dCas9-Activator Assay Kit (cat. # CRATEST) —Measure the transcriptional activator efficacy of any of the several dCas9-activator variants used for the CRISPRa system, including dCas9-VP64, dCas9-Rta, Cellecta's dCas9-VPH.

CRISPRiTest™ Fluorescent Reporter dCas9-Repressor Assay Kit (cat. # CRITEST) —Measure the transcriptional repressor function of any dCas9-repressor fusion, such as dCas9-KRAB.

CRISPRtest™ Essential Gene Knockout Cas9 Assays. Kits available to measure Cas9 knockout activity in Human Cells or Mouse Cells. Options for GFP or BFP reporters.

Combination Kits: CRISPR-Test Assay and Cas9 with 4 Different Promoters

To find the optimal Cas9 or dCas9 repressor or activator construct for your cell system, Cellecta offers a combination of four Cas9



expression constructs at a reduced price when purchased in conjunction with one of the CRISPR-Test Assays.

CRISPRuTest™ dCas9 Assay

(cat. # CRUTP-SET) with 10⁶ TU of each of the following:

- CMV-Cas9-Puro
- RSV-Cas9-Puro
- EFS-Cas9-Puro
- SFFV-Cas9-Puro

CRISPRiTest™ dCas9-Repressor Assay

(cat. # CRITP-SET) with 10⁶ TU of each of the following:

- CMV-dCas9-KRAB-Puro
- RSV-dCas9-KRAB-Puro
- EFS-dCas9-KRAB-Puro
- SFFV-dCas9-KRAB-Puro

CRISPRaTest™ dCas9-Activator Assay

(cat. # CRATP-SET) with 10⁶ TU of each of the following:

- CMV-dCas9-VPH-Puro
- RSV-dCas9-VPH-Puro
- EFS-dCas9-VPH-Puro
- SFFV-dCas9-VPH-Puro

Ordering Information

Catalog #	Description
CRUTEST	CRISPRuTest™ Functional Cas9 Nuclease Activity Assay Kit
CRATEST	CRISPRaTest™ Functional dCas9-Activator Assay Kit
CRITEST	CRISPRiTest™ Functional dCas9-Repressor Assay Kit Cas9
CRUTP-SET	CRISPRuTest™ dCas9 Assay with 10 ⁶ TU of 4 Cas9 Constructs
CRATP-SET	CRISPRaTest™ dCas9-Activator Assay with 10 ⁶ TU of 4 dCas9-Activator Constructs
CRITP-SET	CRISPRiTest™ dCas9-Repressor Assay with 10 ⁶ TU of 4 dCas9-Repressor Constructs
CRTEST	CRISPRtest™ Functional Cas9 Essential-Gene Knockout Assay for Human Cells, GFP/RFP Fluorescence
CRTESTB	CRISPRtest™ Functional Cas9 Essential-Gene Knockout Assay for Human Cells, BFP/RFP Fluorescence
CRTESTM	CRISPRtest™ Functional Cas9 Essential-Gene Knockout Assay for Mouse Cells, GFP/RFP Fluorescence
CRTESTMB	CRISPRtest™ Functional Cas9 Essential-Gene Knockout Assay for Mouse Cells, BFP/RFP Fluorescence