



CRISPR ready, Cas9 expression stable cell line manual

Catalog Number	Product Name	Amount
SC043-Cas9-Puro	A549 / Cas9 (Puro) Stable cell line	1 vial of cells ($>2 \times 10^6$ cells) in 80% medium, 10% FBS, 10% DMSO
SC043-Cas9-GP	A549 / Cas9 (GFP-Puro) Stable cell line	
SC043-Cas9-RP	A549 / Cas9 (RFP-Puro) Stable cell line	

Storage: liquid Nitrogen.

Product Description

The **A549** cell line is originated from human adenocarcinomic, alveolar basal epithelial cells. The A549 cell line was first developed in 1972 by D. J. Giard, et al. through explant culture of lung carcinomatous tissue from a 58-year-old Caucasian male. These cells grow as adhesive monolayer cells in culture flask.

CRISPR (Clustered Regularly Interspaced Short Palindromic Repeats) is the advanced genomic gene editing technology. A target's sequence specific guide RNA molecule (gRNA) directs a cas endonuclease to the genomic DNA target sequence. Then, the Cas enzyme creates a double-strand break at the target sequence that can be repaired by either Non-Homologous End-Joining (NHEJ), which can result in insertion or deletions (InDels), or correction / Homology Directed Repair (HDR). InDels can disrupt expression of the target gene while repair by HDR, which requires the presence of a repair template, allows modification of the gene.

Cas9 is the most frequently used cas endonuclease so far. GenTarget's CRISPR ready cell lines are transformed from lentivirus transduction, expressing a standalone cas9 enzyme. Each cell line expresses the nuclear penetrating humanized wild-type Cas9 endonuclease. The Cas9 enzyme is driven by our engineered super strong CMV promoter (suCMV). Each cell line also contains an **Puromycin** antibiotic selection marker or an **fluorescent-Puromycin** fusion dual marker (**GFP**-puromycin or **RFP**-Puromycin) under the RSV promoter.

The **CRISPR ready (Cas9 expression) stable cell lines** make the genomic editing easier than ever. You simply deliver the target specific gRNA into the CRISPR ready cell line and select the knock-out or knock-in cells for your desired target. No need to do cas9 containing CRISPR cloning, and no worry about the



hard-to-delivered Cas9 constructs. You only need to generate the much easier in cloning, and much smaller in size of the target-gRNA constructs. GenTarget also provide services to generate your target specific, ready-to-use gRNA lentivirus. Please [contact us](#) if you need the CRISPR gRNA lentivirus services.

Please see the structure of the **expression cassette** (below) that integrated into each cell genome (note: the cell line cannot be guaranteed originated from a single cell colony and multiple expression cassettes may exist in some cells).



Culture procedures

1. Thaw the frozen vial of cells quickly in a 37°C water bath (1~3min), decontaminate the outside of the vial with 70% ethanol.
2. Transfer the entire contents of the cryovial into a T-75 cm² flask containing 15 ml of pre-warmed complete medium. Incubate the cells overnight in a 37°C incubator, 5% CO₂.
3. The following day, replace the medium with 15 ml of pre-warmed, complete medium.
4. Incubate the cells and monitor cell density.
5. Pass cells (1:10 dilution) when the culture reaches 80-90% confluent.
6. Freeze cells at a density of 3 x 10⁶ cells/ml using 90% complete medium with 10% DMSO.

Complete medium

Completed culture medium for each specific host cell line (Refer to ATCC website).

Quality Control

Each vial contains greater than 2 x 10⁶ cells with >95% viability before freeze. Cells are tested free of bacteria, viruses, mycoplasma.

Warranty and user terms

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- GenTarget is not liable, and does not have any responsibility or liability, whatsoever for any direct and indirect, consequential, or other damages resulting from using this Product.

Attachment: GenTarget's pre-made stable cell line list

Catalog #	Product Name
<u>SC001</u>	HEK293-GFP stable cells
<u>SC002-Bsd</u>	luciferase (firefly), HEK293 stable cells (Blasticidin)
<u>SC002-GB</u>	luciferase (firefly), HEK293 stable cells (GFP-Blasticidin)
<u>SC002-GP</u>	luciferase (firefly), HEK293 stable cells (GFP-Puromycin)
<u>SC002-Neo</u>	luciferase (firefly), HEK293 stable cells (Neomycin)
<u>SC002-Puro</u>	luciferase (firefly), HEK293 stable cells (Puromycin)
<u>SC002-RB</u>	luciferase (firefly), HEK293 stable cells (RFP, Blasticidin)
<u>SC002-RP</u>	luciferase (firefly), HEK293 stable cells (RFP-Puromycin)
<u>SC003</u>	LacZ stable cells
<u>SC004-Bsd</u>	CRE stable cells with Puromycin marker



<u>SC004-GP</u>	CRE stable cells with GFP-Puromycin dual marker
<u>SC004-Neo</u>	CRE stable cells with Puromycin marker
<u>SC004-Puro</u>	CRE stable cells with Puromycin marker
<u>SC004-RB</u>	CRE stable cells with RFP-blasticidin dual marker
<u>SC004-RP</u>	CRE stable cells with RFP-Puromycin dual marker
<u>SC005-Bsd</u>	HEK293-TetR (Bsd)
<u>SC005-GB</u>	HEK293-TetR (GFP-Bsd)
<u>SC005-Hygro</u>	HEK293-TetR (Hygro)
<u>SC005-Neo</u>	HEK293-TetR (Neo)
<u>SC005-Puro</u>	HEK293-TetR (Puro)
<u>SC005-RB</u>	HEK293-TetR (RFP-Bsd)
<u>SC005-RP</u>	HEK293-TetR (RFP-Puro)
<u>SC006</u>	Flp recombinase expression HEK293 stable cell
<u>SC007</u>	HEK293-RFP stable cells
<u>SC008</u>	GFP-LacZ & RFP stable cells
<u>SC009</u>	GFP & RFP HEK293 stable cells
<u>SC010</u>	HEK293-CFP stable cells
<u>SC011</u>	HEK293-YFP stable cells
<u>SC012</u>	TAT stable cells
<u>SC013</u>	Glutamine Synthesis stable cells
<u>SC014</u>	Inducible h P53 stable cells
<u>SC015</u>	h OCT3/4 stable cells
<u>SC016</u>	h LIN28 stable cells



<u>SC018-Bsd</u>	Color Switch, CRE report cell line: HEK293-loxP-GFP-RFP (Bsd)
<u>SC018-Neo</u>	Color Switch, CRE report cell line: HEK293-loxP-GFP-RFP Neo)
<u>SC018-Puro</u>	Color Switch, CRE report cell line: HEK293-loxP-GFP-RFP (Puro)
<u>SC020-Puro</u>	luciferase (Renilla), HEK293 stable cells (Puromycin)
<u>SC020-RP</u>	luciferase (Renilla), HEK293 stable cells (RFP-Puromycin)
<u>SC021-GB</u>	Luciferase (firefly) and CRE co-expression stable cell line (GFP-Blasticidin)
<u>SC021-Puro</u>	Luciferase (firefly) and CRE co-expression stable cell line (puromycin)
<u>SC021-RP</u>	Luciferase (firefly) and CRE co-expression stable cell line (RFP-puromycin)
<u>SC022-RB</u>	HEK293-CFTR cell line with RFP and Blasticidin dual marker
<u>SC023-RB</u>	HEK293-CLCN2 cell line with RFP and Blasticidin dual marker
<u>SC024-RB</u>	HEK293-TRPC3 cell line with RFP and Puromycin dual marker
<u>SC025-RB</u>	HEK293-KCNN4 cell line with RFP and Puromycin dual marker
<u>SC026-RB</u>	HEK293-ATP2B2 cell line with RFP and Puromycin dual marker
<u>SC027-RB</u>	HEK293-TRPV1 cell line with RFP and Puromycin dual marker
<u>SC028</u>	Inducible RFP HEK293 stable cell line



<u>SC029</u>	inducible RFP HEK293 stable cell line with GFP marker
<u>SC030</u>	inducible GFP HEK293 stable cell line with RFP marker
<u>SC031-Puro</u>	Hela-RFP stable cells
<u>SC032-Bsd</u>	Luciferase (firefly), Hela stable cells (Blasticidin)
<u>SC032-GB</u>	Luciferase-2A-GFP, Hela stable cells (Blasticidin)
<u>SC032-GN</u>	Luciferase-2A-GFP, Hela stable cells (Neomycin)
<u>SC032-GP</u>	Luciferase-2A-GFP, Hela stable cells (Puromycin)
<u>SC032-Puro</u>	Luciferase (firefly), Hela stable cells (Puromycin)
<u>SC032-RB</u>	Luciferase-2A-RFP, Hela stable cells (Blasticidin)
<u>SC032-RN</u>	Luciferase-2A-RFP, Hela stable cells (Neomycin)
<u>SC032-RP</u>	Luciferase-2A-RFP, Hela stable cells (Puromycin)
<u>SC033</u>	Inducible GFP HEK293 stable cell line
<u>SC034-Bsd</u>	Hela-GFP stable cells (Blasticidin)
<u>SC034-Puro</u>	Hela-GFP stable cells (Puromycin)
<u>SC035-Puro</u>	Hela-TetR (Puro) stable cells
<u>SC036</u>	Inducible GFP Hela stable cell line



<u>SC037</u>	Inducible RFP Hela stable cell line
<u>SC038-GB</u>	Hela-rtTA (GFP-Bsd) stable cells
<u>SC038-GP</u>	Hela-rtTA (GFP-Puro) stable cells
<u>SC038-RB</u>	Hela-rtTA (RFP-Bsd) stable cells
<u>SC039-Bsd</u>	CHO-GFP stable cells (Blasticidin)
<u>SC039-Puro</u>	CHO-GFP stable cells (Puromycin)
<u>SC040-Bsd</u>	MDA-MB-231 / GFP (Bsd) Stable Cell Line
<u>SC040-Puro</u>	MDA-MB-231 / GFP (Puro) Stable Cell Line
<u>SC040-TetR</u>	MDA-MB-231 / TetR (Puro) stable cells
<u>SC041</u>	MDA-MB-231 / Luciferase-2A-RFP Stable Cell Line
<u>SC042</u>	SH-SY5Y / GFP (Puromycin) stable cell line
<u>SC043-Bsd</u>	A549 / GFP stable cells (Blasticidin)
<u>SC043-Cas9-GP</u>	A549 / Cas9 (GFP-Puro) Stable Cell Line
<u>SC043-Cas9-Puro</u>	A549 / Cas9 (Puro) Stable Cell Line
<u>SC043-Cas9-RP</u>	A549 / Cas9 (RFP-Puro) Stable Cell Line
<u>SC043-LG</u>	A549 / Luciferase-2A-GFP (Puromycin) stable cell line
<u>SC043-Luc</u>	A549 / Luciferase (Puromycin) stable cell line
<u>SC043-TetR</u>	A549 / TetR (Puro) stable cells
<u>SC044</u>	MDA-MB-231 / Luciferase-2A-GFP Stable Cell Line
<u>SC045-Cas9-Bsd</u>	Hela / Cas9 (Bad) Stable Cell Line
<u>SC046</u>	SH-SY5Y / RFP (Puromycin) stable cell line
<u>SC047-GB</u>	RKO / GFP Stable Cell Line (Blasticidin)
<u>SC047-TetR</u>	RKO / TetR (Bsd) Stable Cell Line



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<u>SC048</u>	Jurkat T Cell /Firefly Luciferase (Puro) Stable Cell line
<u>SC049-1</u>	Jurkat T / GFP Stable Cell (EF1a Promoter)
<u>SC049-2</u>	Jurkat T / GFP Stable Cell (Flt1 Promoter)
<u>SC049-3</u>	Jurkat T / GFP Stable Cell (CD34 Promoter)
<u>SC049-4</u>	Jurkat T / GFP Stable Cell (CD68 Promoter)
<u>SC049-5</u>	Jurkat T / GFP Stable Cell (Survivin Promoter)
<u>TLV-C</u>	HEK293-TLV lentivirus packing cells