SABiosciences™

Product Specification Sheet

SureSilencing™ SilenciX Knockout Cell Lines

hRad54 HeLa SilenciX Catalog # SLX-00022

Description

Lot #	080825C
Source	Adherent HeLa cells silenced for hRad54 (Accession Number: NM_003579), Clone BD912/5
Formulation	Cryo-preserved at passage 24

Target Background

Targeted Gene	**hRad54**
Source	Homo sapiens
Gene Name	RAD54-like (S. cerevisiae), HR54; HRAD54
Gene Accession Number	NM_003579
Protein Accession Number	Q92698
Protein Name	DNA repair and recombination protein RAD54-like
Protein Function	Involved in DNA repair and mitotic recombination. Functions in the recombinational DNA repair (Rad52) pathway. Dissociates Rad51 from nucleoprotein filaments formed on dsDNA. Could be involved in the turnover of Rad51 protein-dsDNA filaments (by similarity). May play also an essential role in telomere length maintenance and telomere capping by mammalian cells.

Quality Control

Contamination Analysis

Tested free of bacterial contamination in antibiotic-free medium and tested free of mycoplasma with MycoAlert Mycoplasma Detection Kit (Lonza Inc, USA: Catalog Number LT07-318)

Silencing Validation by real-time PCR:

Cell line	**hRad54 HeLa SilenciX**
hRad54 Silencing (%)	**81%**

Validation of hRad54 knock-down by real-time PCR in hRad54 HeLa SilenciX cells, in comparison with Control HeLa SilenciX cells, using the hRad54 primer set PPH01719A (SABiosciences).

Relative PCR quantitation allows direct comparison of gene expression levels for housekeeping genes and the target gene of interest (GOI) in both control HeLa SilenciX cells and GOI HeLa SilenciX cells.

The difference between the C_t values (ΔC_t) for each gene is calculated:

$$\Delta C_t \text{ (GOI HeLa SilenciX)} = C_t \text{ (GOI HeLa SilenciX)} - C_t \text{ (Housekeeping gene)}$$
$$\Delta C_t \text{ (control HeLa SilenciX)} = C_t \text{ (control HeLa SilenciX)} - C_t \text{ (Housekeeping gene)}$$

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The difference in ΔC_t values ($\Delta\Delta C_t$) is determined between the control HeLa SilenciX cells and the GOI HeLa SilenciX cells.

$$\Delta\Delta C_t = \Delta C_t \text{ (GOI HeLa SilenciX)} - \Delta C_t \text{ (control HeLa SilenciX)}$$

The fold change in gene expression is obtained as follows:

$$\text{Fold Change} = 2^{-[\Delta C_t \text{ (GOI HeLa SilenciX)} - \Delta C_t \text{ (control HeLa SilenciX)}]}$$

The level of GOI expression in control HeLa SilenciX is set to 1 and represents 100% GOI expression in the control HeLa SilenciX cell line. The level of silencing is expressed as percentage of GOI silencing:

Percentage of GOI silencing = 100 – (fold change X 100)

Storage Conditions

SureSilencing SilenciX Knockout cells are shipped on dry ice. For efficient and long-term storage, store this cell line properly in liquid nitrogen.

Usage Restrictions

This product is intended for research purposes only and is not intended for diagnostic and clinical purposes or for Human applications. You are responsible for its safe storage, handling, and use.

SABiosciences and tebu-bio are not liable for any damages or injuries arising from receipt and/or use of this product.

It is strictly forbidden to:

- make the SilenciX cell lines available to any third party,
- transfer, sell, or distribute the silenced and the control cell lines, out of the laboratory,
- sub-license the silenced and the control cell lines,
- develop new cell lines using the SilenciX know-how,
- offer commercial services on SilenciX cell lines (silenced and control cell lines).

Technical Service

For more information about the use of SureSilencing SilenciX Knockout cell lines, please contact technical support at: **Support@SABiosciences.com**

MORE INFORMATION AT www.SABiosciences.com

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