

# BRCA1 Knockdown HeLa Cell Line, Heterozygous

Catalog No.: RM02720

## Basic Information

### Catalog No.

RM02720

### Category

Cell Line

### Parental Cell line

HeLa

### Genotype

Knockdown

## Gene Information

### Gene Symbol

BRCA1

### Species

Human

### Gene ID

672

### Swiss Prot

P38398

### Synonyms

BRCAI; BRCC1; BROVCA1; FANCS; IRIS;  
PNCA4; PPP1R53; PSCP; RNF53

## Contact

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## Background

This gene encodes a nuclear phosphoprotein that plays a role in maintaining genomic stability, and it also acts as a tumor suppressor. The encoded protein combines with other tumor suppressors, DNA damage sensors, and signal transducers to form a large multi-subunit protein complex known as the BRCA1-associated genome surveillance complex (BASC). This gene product associates with RNA polymerase II, and through the C-terminal domain, also interacts with histone deacetylase complexes. This protein thus plays a role in transcription, DNA repair of double-stranded breaks, and recombination. Mutations in this gene are responsible for approximately 40% of inherited breast cancers and more than 80% of inherited breast and ovarian cancers. Alternative splicing plays a role in modulating the subcellular localization and physiological function of this gene. Many alternatively spliced transcript variants, some of which are disease-associated mutations, have been described for this gene, but the full-length natures of only some of these variants has been described. A related pseudogene, which is also located on chromosome 17, has been identified. [provided by RefSeq, May 2009]

## Product Information

### Description

BRCA1 Knockdown HeLa Cell Line is engineered from HeLa cell line with Gene-Editing technology.

Allele-1:exon4 was deleted

Allele-2:WT

Mammalian cells such as human, rat and mouse cells are normally diploid with two alleles. Homozygote: both alleles were knocked out, mRNA has no signal, no expression of proteins. Heterozygote: only one allele was knocked out, the mRNA transcript levels was decreased compared to wild type, and the protein expression levels was also lower than that of the wild type.

### Packaging

1 vial parental cell line and 1 vial knockout cell line

### Shipping Conditions

Dry ice

### Amount

1~5x10<sup>6</sup> cells/vial

### Storage

Stored in liquid nitrogen for a long time less than -130°C. Minimizing freeze-thaw cycles.

### Protocol

Upon arrival, it should be maintained in DMEM medium with 10%(v/v) fetal bovine serum and 100U penicillin-streptomycin, at 37°C with 5% CO<sub>2</sub> condition.

1. Thaw the vial in 37°C water bath, and shake it to melt as soon as possible.
2. Transfer the cell suspension to a 15mL conical tube with pre-warmed 5mL complete medium and centrifuge 1000rpm for approximately 5 minutes at room temperature.
3. Remove and discard the supernatant.
4. Resuspend the cell pellet with 1mL pre-warmed complete medium and seed in 10cm dish.
5. Add 8-10mL of complete medium.
6. Incubate the culture at 37°C incubator with 5% CO<sub>2</sub>.
7. A subcultivation ratio of 1:2-1:4 is recommended.

## Sequencing data

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WT CACTGCCATCA\*\*\*\*\*GACGTGGTGAT  
Mut CACTGCCATCA\*\*\*Deletion(323bp)\*\*\*GACGTGGTGAT  
Allele-1: exon4 was deleted

Genome sequence analysis of PCR products from parental (WT) and BRCA1 knockdown (KD) HeLa cells, using sanger sequencing.

WT CACTGCCATCA\*\*\*\*\*GTGGTGATAAG  
Mut CACTGCCATCA\*\*\*\*\*GTGGTGATAAG  
Allele-2: WT