

ACTA2 Knockout HeLa Cell Line, Homozygous

Catalog No.: RM01844

Basic Information

Catalog No.

RM01844

Category

Cell Line

Parental Cell line

HeLa

Genotype

Knockout

Gene Information

Gene Symbol

ACTA2

Species

Human

Gene ID

59

Swiss Prot

P62736

Synonyms

AAT6; ACTSA; MYMY5

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Background

The protein encoded by this gene belongs to the actin family of proteins, which are highly conserved proteins that play a role in cell motility, structure and integrity. Alpha, beta and gamma actin isoforms have been identified, with alpha actins being a major constituent of the contractile apparatus, while beta and gamma actins are involved in the regulation of cell motility. This actin is an alpha actin that is found in skeletal muscle. Defects in this gene cause aortic aneurysm familial thoracic type 6. Multiple alternatively spliced variants, encoding the same protein, have been identified.

Product Information

Description

ACTA2 Knockout cell line is engineered from HeLa cell line with Gene-Editing Technology.

Allele-1:56bp deletion in exon2

Allele-2:56bp deletion in exon2

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

1~5x10⁶ 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% CO₂ 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% CO₂.
7. A subcultivation ratio of 1:2-1:4 is recommended.

Sequencing data

WT CAAAAGACAGCTA*****AACATGGCATCATC
Mut CAAAAGACAGCTA***Deletion***AACATGGCATCATC
Allele-1: 56bp deletion in exon2
WT CAAAAGACAGCTA*****AACATGGCATCATC
Mut CAAAAGACAGCTA***Deletion***AACATGGCATCATC
Allele-2: 56bp deletion in exon2

Genome sequence analysis of PCR products from parental (WT) and ACTA2 knockout (KO) HeLa cells, using sanger sequencing.