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GJA1 Knockout HeLa Cell Line, Homozygous

Catalog No.: RM02214

Basic Information

Catalog No.
RM02214

Category
Cell Line

Parental Cell line
HeLa

Genotype
Knockout

Background

This gene is a member of the connexin gene family. The encoded protein is a component of gap junctions, which are composed of arrays of intercellular channels that provide a route for the diffusion of low molecular weight materials from cell to cell. The encoded protein is the major protein of gap junctions in the heart that are thought to have a crucial role in the synchronized contraction of the heart and in embryonic development. A related intronless pseudogene has been mapped to chromosome 5. Mutations in this gene have been associated with oculodentodigital dysplasia, autosomal recessive craniometaphyseal dysplasia and heart malformations. [provided by RefSeq, May 2014]

Gene Information

Gene Symbol
GJA1

Species
Human

Gene ID
2697

Swiss Prot
P17302

Synonyms
AVSD3; CMDR; CX43; EKVP; GJAL; HLHS1; HSS; ODDD; PPKCA

Product Information

Description
GJA1 Knockout cell line is engineered from HeLa cell line with Gene-Editing Technology.
Allele-1:143bp deletion in exon1
Allele-2:143bp deletion in exon1
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
1~5x10^6 cells/vial

Storage
Store at -20℃

Protocol
Upon arrival, it should be maintained in DMEM medium with 10%(v/v) fetal bovine serum and 100U penicillin-streptomycin, at 37℃ with 5% CO_2 condition.
1. Thaw the vial in 37℃ 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℃ incubator with 5% CO_2.
7. A subcultivation ratio of 1:2-1:4 is recommended.

Contact

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Sequencing data

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WT     TTCTATGTGATGCG**************GGGGGTTGCTGCGA
Mut    TTCTATGTGATGCG***Deletion***GGGGGTTGCTGCGA
Allele-1: 143bp deletion in exon1

WT     TTCTATGTGATGCG**************GGGGGTTGCTGCGA
Mut    TTCTATGTGATGCG***Deletion***GGGGGTTGCTGCGA
Allele-2: 143bp deletion in exon1
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Genome sequence analysis of PCR products from parental (WT) and GJA1 knockout (KO) HeLa cells, using sanger sequencing.