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PITX2 Knockout HeLa Cell Line, Homozygous

Catalog No.: RM02759

Basic Information

Catalog No.
RM02759

Category
Cell Line

Parental Cell line
HeLa

Genotype
Knockout

Background

This gene encodes a member of the RIEG/PITX homeobox family, which is in the bicoid class of homeodomain proteins. The encoded protein acts as a transcription factor and regulates procollagen lysyl hydroxylase gene expression. This protein plays a role in the terminal differentiation of somatotroph and lactotroph cell phenotypes, is involved in the development of the eye, tooth and abdominal organs, and acts as a transcriptional regulator involved in basal and hormone-regulated activity of prolactin. Mutations in this gene are associated with Axenfeld-Rieger syndrome, iridogoniodysgenesis syndrome, and sporadic cases of Peters anomaly. A similar protein in other vertebrates is involved in the determination of left-right asymmetry during development. Alternatively spliced transcript variants encoding distinct isoforms have been described.

Gene Information

Gene Symbol
PITX2

Species
Human

Gene ID
5308

Swiss Prot
Q99697

Synonyms
RS; RGS; ARP1; Brx1; IDG2; IGDS; IHG2; PTX2; RIEG; ASGD4; IGDS2; IRID2; Otlx2; RIEG1; Pituitary homeobox 2 (PITX2)

Product Information

Description
PITX2 Knockout cell line is engineered from HeLa cell line with Gene-Editing Technology.
Allele-1:139bp deletion in exon2
Allele-2:154bp 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
1~5x10^6 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    TCTAAGAAGAAGCG*************ATCTCACGAGCTGG
Mut   TCTAAGAAGAAGCG***Deletion***ATCTCACGAGCTGG
Allele-1:    139bp deletion in exon2

WT    GGCGCCGAGGACCC*************AATGTGGAAGGCAG
Mut   GGCGCCGAGGACCC***Deletion***AATGTGGAAGGCAG
Allele-2:    154bp deletion in exon2
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Genome sequence analysis of PCR products from parental (WT) and PITX2 knockout (KO) HeLa cells, using sanger sequencing.

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