

COL1A2 Knockout 293T Cell Line, Homozygous

Catalog No.: RM02715

Basic Information

Catalog No.

RM02715

Category

Cell Line

Parental Cell line

293T

Genotype

Knockout

Gene Information

Gene Symbol

COL1A2

Species

Human

Gene ID

1278

Swiss Prot

P08123

Synonyms

OI4; EDSCV; EDSARTH2; Collagen I/COL1A2

Contact

 | 400-999-6126 | cn.market@abclonal.com.cn | www.abclonal.com.cn

Background

This gene encodes the pro-alpha2 chain of type I collagen whose triple helix comprises two alpha1 chains and one alpha2 chain. Type I is a fibril-forming collagen found in most connective tissues and is abundant in bone, cornea, dermis and tendon. Mutations in this gene are associated with osteogenesis imperfecta types I-IV, Ehlers-Danlos syndrome type VIIB, recessive Ehlers-Danlos syndrome Classical type, idiopathic osteoporosis, and atypical Marfan syndrome. Symptoms associated with mutations in this gene, however, tend to be less severe than mutations in the gene for the alpha1 chain of type I collagen (COL1A1) reflecting the different role of alpha2 chains in matrix integrity. Three transcripts, resulting from the use of alternate polyadenylation signals, have been identified for this gene.

Product Information

Description

COL1A2 Knockout cell line is engineered from 293T cell line with Gene-Editing Technology.

Allele-1:exon1 was deleted

Allele-2:exon1 was deleted

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

Amount1~5x10⁶ 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 GGGGCTCTGCGAC*****TAAGTGCCTTCAGC
Mut GGGGCTCTGCGAC***Deletion***TAAGTGCCTTCAGC
Allele-1: exon1 was deleted

Genome sequence analysis of PCR products from parental (WT) and COL1A2 knockout (KO) 293T cells, using sanger sequencing.

WT GGGGCTCTGCGAC*****TAAGTGCCTTCAGC
Mut GGGGCTCTGCGAC***Deletion***TAAGTGCCTTCAGC
Allele-2: exon1 was deleted