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MMP13 Knockdown 293T Cell Line, Heterozygous

Catalog No.: RM02129

Basic Information

Catalog No.
RM02129

Category
Cell Line

Parental Cell line
293T

Genotype
Knockdown

Background

This gene encodes a member of the peptidase M10 family of matrix metalloproteinases (MMPs). Proteins in this family are involved in the breakdown of extracellular matrix in normal physiological processes, such as embryonic development, reproduction, and tissue remodeling, as well as in disease processes, such as arthritis and metastasis. The encoded preproprotein is proteolytically processed to generate the mature protease. This protease cleaves type II collagen more efficiently than types I and III. It may be involved in articular cartilage turnover and cartilage pathophysiology associated with osteoarthritis. Mutations in this gene are associated with metaphyseal anadysplasia. This gene is part of a cluster of MMP genes on chromosome 11. [provided by RefSeq, Jan 2016]

Gene Information

Gene Symbol
MMP13

Species
Human

Gene ID
4322

Swiss Prot
P45452

Synonyms
CLG3; MANDP1; MDST; MMP-13

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Product Information

Description
MMP13 Knockdown 293T Cell Line is engineered from 293T cell line with Gene-Editing Technology.
Allele-1:81bp deletion in exon2
Allele-2:83bp 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
Stored in liquid nitrogen for a long time less than -130℃. 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℃ 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.

Sequencing data

WT ATACTACCATCCTA**********TAGAGGTGACTGGC
Mut ATACTACCATCCTA***Deletion***TAGAGGTGACTGGC
Allele-1: 81bp deletion in exon2

WT ATCATACTACCATC**********TTAGAGGTGACTGG
Mut ATCATACTACCATC***Deletion***TTAGAGGTGACTGG
Allele-2: 83bp deletion in exon2

Genome sequence analysis of PCR products from parental (WT) and MMP13 Knockdown (KD) 293T cells, using sanger sequencing.