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DAO Knockout 293T Cell Line, Homozygous

Catalog No.: RM02671

Basic Information

Catalog No.
RM02671

Category
Cell Line

Parental Cell line
293T

Genotype
Knockout

Gene Information

Gene Symbol
DAO

Species
Human

Gene ID
1610

Swiss Prot
P14920

Synonyms
DAAO; OXDA; DAMOX

Contact

400-999-6126

cn.market@abclonal.com.cn

www.abclonal.com.cn

Background

This gene encodes the peroxisomal enzyme D-amino acid oxidase. The enzyme is a flavoprotein which uses flavin adenine dinucleotide (FAD) as its prosthetic group. Its substrates include a wide variety of D-amino acids, but it is inactive on the naturally occurring L-amino acids. Its biological function is not known; it may act as a detoxifying agent which removes D-amino acids that accumulate during aging. In mice, it degrades D-serine, a co-agonist of the NMDA receptor. This gene may play a role in the pathophysiology of schizophrenia.

Product Information

Description
DAO Knockout cell line is engineered from 293T cell line with Gene-Editing Technology.
Allele-1:74bp deletion in exon1
Allele-2:74bp 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
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

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WT    CTCTGCATCCATGA**********ACGTGGCTGCCGGC
Mut   CTCTGCATCCATGA***Deletion***ACGTGGCTGCCGGC
Allele-1:    74bp deletion in exon1

WT    CTCTGCATCCATGA**********ACGTGGCTGCCGGC
Mut   CTCTGCATCCATGA***Deletion***ACGTGGCTGCCGGC
Allele-2:    74bp deletion in exon1
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Genome sequence analysis of PCR products from parental (WT) and DAO knockout (KO) 293T cells, using sanger sequencing.