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NPY Knockout 293T Cell Line, Homozygous

Catalog No.: RM02432

Basic Information

Catalog No.
RM02432

Category
Cell Line

Parental Cell line
293T

Genotype
Knockout

Gene Information

Gene Symbol
NPY

Species
Human

Gene ID
4852

Swiss Prot
P01303

Synonyms
PYY4

Contact

400-999-6126

cn.market@abclonal.com.cn

www.abclonal.com.cn

Background

This gene encodes a neuropeptide that is widely expressed in the central nervous system and influences many physiological processes, including cortical excitability, stress response, food intake, circadian rhythms, and cardiovascular function. The neuropeptide functions through G protein-coupled receptors to inhibit adenylyl cyclase, activate mitogen-activated protein kinase (MAPK), regulate intracellular calcium levels, and activate potassium channels. A polymorphism in this gene resulting in a change of leucine 7 to proline in the signal peptide is associated with elevated cholesterol levels, higher alcohol consumption, and may be a risk factor for various metabolic and cardiovascular diseases. The protein also exhibits antimicrobial activity against bacteria and fungi. [provided by RefSeq, Oct 2014]

Product Information

Description
NPY Knockout 293T Cell line is engineered from 293T cell line with Gene-Editing Technology.
Allele-1:40bp deletion in exon1
Allele-2:40bp 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.

Sequencing data

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WT     CTCCAAGCCGGACA**************CTACTCGGCGCTGC
Mut    CTCCAAGCCGGACA***Deletion***CTACTCGGCGCTGC
Allele-1：40bp deletion in exon1

WT     CTCCAAGCCGGACA**************CTACTCGGCGCTGC
Mut    CTCCAAGCCGGACA***Deletion***CTACTCGGCGCTGC
Allele-2：40bp deletion in exon1
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Genome sequence analysis of PCR products from parental (WT) and NPY knockout (KO) 293T cells, using sanger sequencing.