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OPRM1 Knockout 293T Cell Line, Homozygous

Catalog No.: RM02447

Basic Information

Catalog No.
RM02447

Category
Cell Line

Parental Cell line
293T

Genotype
Knockout

Background

This gene encodes one of at least three opioid receptors in humans; the mu opioid receptor (MOR). The MOR is the principal target of endogenous opioid peptides and opioid analgesic agents such as beta-endorphin and enkephalins. The MOR also has an important role in dependence to other drugs of abuse, such as nicotine, cocaine, and alcohol via its modulation of the dopamine system. The NM_001008503.2:c.118A>G allele has been associated with opioid and alcohol addiction and variations in pain sensitivity but evidence for it having a causal role is conflicting. Multiple transcript variants encoding different isoforms have been found for this gene. Though the canonical MOR belongs to the superfamily of 7-transmembrane-spanning G-protein-coupled receptors some isoforms of this gene have only 6 transmembrane domains. [provided by RefSeq, Oct 2013]

Gene Information

Gene Symbol
OPRM1

Species
Human

Gene ID
4988

Swiss Prot
P35372

Synonyms
LMOR; M-OR-1; MOP; MOR; MOR1; OPRM

Product Information

Description
OPRM1 Knockout 293T Cell line is engineered from 293T cell line with Gene-Editing Technology.
Allele-1:53bp deletion in exon2
Allele-2:53bp 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    ATATTCACCCTCTG**************ATTTCCGTACTCCC
Mut   ATATTCACCCTCTG***Deletion***ATTTCCGTACTCCC
Allele-1：53bp deletion in exon2

WT    ATATTCACCCTCTG**************ATTTCCGTACTCCC
Mut   ATATTCACCCTCTG***Deletion***ATTTCCGTACTCCC
Allele-2：53bp deletion in exon2
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Genome sequence analysis of PCR products from parental (WT) and OPRM1 knockout (KO) HeLa cells, using sanger sequencing.