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KRAS Knockout 293T Cell Line, Homozygous

Catalog No.: RM01840

Basic Information

Catalog No.
RM01840

Category
Cell Line

Parental Cell line
293T

Genotype
Knockout

Gene Information

Gene Symbol
KRAS

Species
Human

Gene ID
3845

Swiss Prot
P01116

Synonyms
C-K-RAS; CFC2; K-RAS2A; K-RAS2B; K-RAS4A; K-RAS4B; KI-RAS; KRAS1; KRAS2; NS; NS3; RALD; RASK2; c-Ki-ras2

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Background

This gene, a Kirsten ras oncogene homolog from the mammalian ras gene family, encodes a protein that is a member of the small GTPase superfamily. A single amino acid substitution is responsible for an activating mutation. The transforming protein that results is implicated in various malignancies, including lung adenocarcinoma, mucinous adenoma, ductal carcinoma of the pancreas and colorectal carcinoma. Alternative splicing leads to variants encoding two isoforms that differ in the C-terminal region.

Product Information

Description
KRAS Knockout cell line is engineered from 293T cell line with Gene-Editing Technology.
Allele-1:13bp deletion in exon2
Allele-2:13bp 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

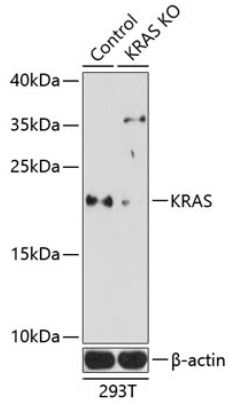
Amount
1~5x10^6 cells/vial.

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.

WB data



Western blot analysis of extracts from parental (Control) and KRAS knockout (KO) 293T cells, using KRAS antibody at 1:1000 dilution.

Sequencing data

WT ACCTGTCTCTTGGA**********GCAGGTCAAGAGGA
Mut ACCTGTCTCTTGGA***Deletion***GCAGGTCAAGAGGA
Allele-1: 13bp deletion in exon2

WT ACCTGTCTCTTGGA**********GCAGGTCAAGAGGA
Mut ACCTGTCTCTTGGA***Deletion***GCAGGTCAAGAGGA
Allele-2: 13bp deletion in exon2

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