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CDKN2A Knockout 293T Cell Lysate, Homozygous

Catalog No.: RM02007

Basic Information

Catalog No.
RM02007

Category
Cell Lysate

Parental Cell line
293T

Genotype
Knockout

Gene Information

Gene Symbol
CDKN2A

Species
Human

Gene ID
1029

Swiss Prot
P42771,Q8N726

Synonyms
ARF; CDK4I; CDKN2; CMM2; INK4; INK4A; MLM; MTS-1; MTS1; P14; P14ARF; P16; P16-INK4A; P16INK4; P16INK4A; P19; P19ARF; TP16

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Background

This gene generates several transcript variants which differ in their first exons. At least three alternatively spliced variants encoding distinct proteins have been reported, two of which encode structurally related isoforms known to function as inhibitors of CDK4 kinase. The remaining transcript includes an alternate first exon located 20 Kb upstream of the remainder of the gene; this transcript contains an alternate open reading frame (ARF) that specifies a protein which is structurally unrelated to the products of the other variants. This ARF product functions as a stabilizer of the tumor suppressor protein p53 as it can interact with, and sequester, the E3 ubiquitin-protein ligase MDM2, a protein responsible for the degradation of p53. In spite of the structural and functional differences, the CDK inhibitor isoforms and the ARF product encoded by this gene, through the regulatory roles of CDK4 and p53 in cell cycle G1 progression, share a common functionality in cell cycle G1 control. This gene is frequently mutated or deleted in a wide variety of tumors, and is known to be an important tumor suppressor gene. [provided by RefSeq, Sep 2012]

Product Information

Description
CDKN2A Knockout 293T Cell Line is engineered from 293T cell line with Gene-Editing technology.
Allele-1:41bp deletion in exon2
Allele-2:41bp 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 Lysate and 1 vial knockout cell Lysate

Shipping Conditions
4℃

Amount
50μL, 2μg/μL.

Storage
Lysate is stable for 12 months when stored at -20℃. Minimizing freeze-thaw cycles.

Protocol
To be used as WB control. Lysate is supplied in 1× SDS sample buffer (2% SDS, 60 mM Tris-HCl pH 6.8, 10% Glycerol, 0.02% Bromophenol blue, 60 mM beta-mercaptoethanol). Lysate should be boiled for 3 - 5 minutes before loading onto gel.

Sequencing data

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WT     CGGAGCCCAACTGC**************CCGGGAGGGCTTCC
Mut    CGGAGCCCAACTGC***Deletion***CCGGGAGGGCTTCC
Allele-1：41bp deletion in exon2

WT     CGGAGCCCAACTGC**************CCGGGAGGGCTTCC
Mut    CGGAGCCCAACTGC***Deletion***CCGGGAGGGCTTCC
Allele-2：41bp deletion in exon2
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Genome sequence analysis of PCR products from parental (WT) and CDKN2A knockout (KO) 293T cells, using sanger sequencing.