

CDKN1A Knockout 293T Cell Lysate, Homozygous

Catalog No.: RM01796

Basic Information

Catalog No.

RM01796

Category

Cell Lysate

Parental Cell line

293T

Genotype

Knockout

Gene Information

Gene Symbol

CDKN1A

Species

Human

Gene ID


1026

Swiss Prot

P38936

SynonymsCAP20; CDKN1; CIP1; MDA-6; P21; SDI1;
WAF1; p21CIP1

Contact

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Background

This gene encodes a potent cyclin-dependent kinase inhibitor. The encoded protein binds to and inhibits the activity of cyclin-cyclin-dependent kinase2 or -cyclin-dependent kinase4 complexes, and thus functions as a regulator of cell cycle progression at G1. The expression of this gene is tightly controlled by the tumor suppressor protein p53, through which this protein mediates the p53-dependent cell cycle G1 phase arrest in response to a variety of stress stimuli. This protein can interact with proliferating cell nuclear antigen, a DNA polymerase accessory factor, and plays a regulatory role in S phase DNA replication and DNA damage repair. This protein was reported to be specifically cleaved by CASP3-like caspases, which thus leads to a dramatic activation of cyclin-dependent kinase2, and may be instrumental in the execution of apoptosis following caspase activation. Mice that lack this gene have the ability to regenerate damaged or missing tissue. Multiple alternatively spliced variants have been found for this gene. [provided by RefSeq, Sep 2015]

Product Information

Description

CDKN1A Knockout 293T Cell Line is engineered from 293T cell line with Gene-Editing technology.

Allele-1:1bp insertion and 51bp deletion in exon1

Allele-2:50bp 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 Lysate and 1 vial knockout cell Lysate

Shipping Conditions

4°C

Amount

50μL, 2μg/μL.

Storage

Lysate is stable for 12 months when stored at -20°C. 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

WT GGAGGCCCGTG*****CCTGGGAGCGT
Mut GGAGGCCCGTGC***Deletion(51bp)***CCTGGGAGCGT
Allele-1: 1bp Insertion and 51bp deletion in exon1
WT GAGGCCCGTGA*****CCTGGGAGCGT
Mut GAGGCCCGTGA***Deletion(50bp)***CCTGGGAGCGT
Allele-2: 50bp deletion in exon1

Genome sequence analysis of PCR products from parental (WT) and CDKN1A knockout (KO) 293T cells, using sanger sequencing.