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# SMAD4 Knockdown 293T Cell Lysate, Heterozygous

**Catalog No.: RM02042**

## Basic Information

**Catalog No.**
RM02042

**Category**
Cell Lysate

**Parental Cell line**
293T

**Genotype**
Knockdown

## Background

This gene encodes a member of the Smad family of signal transduction proteins. Smad proteins are phosphorylated and activated by transmembrane serine-threonine receptor kinases in response to TGF-beta signaling. The product of this gene forms homomeric complexes and heteromeric complexes with other activated Smad proteins, which then accumulate in the nucleus and regulate the transcription of target genes. This protein binds to DNA and recognizes an 8-bp palindromic sequence (GTCTAGAC) called the Smad-binding element (SBE). The Smad proteins are subject to complex regulation by post-translational modifications. Mutations or deletions in this gene have been shown to result in pancreatic cancer, juvenile polyposis syndrome, and hereditary hemorrhagic telangiectasia syndrome. [provided by RefSeq, Oct 2009]

## Gene Information

**Gene Symbol**
SMAD4

**Species**
Human

**Gene ID**
4089

**Swiss Prot**
Q13485

**Synonyms**
DPC4; JIP; MADH4; MYHRS

## Product Information

**Description**
SMAD4 Knockdown 293T Cell Line is engineered from 293T cell line with Gene-Editing technology.
Allele-1:139bp deletion in exon1
Allele-2:141bp 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℃

**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.

## Contact


400-999-6126

cn.market@abclonal.com.cn

www.abclonal.com.cn

## Sequencing data

```
WT    TGTGCCATAGACAA**********AGAGAACATTGGAT
Mut   TGTGCCATAGACAA***Deletion***AGAGAACATTGGAT
Allele-1:    139bp deletion in exon1

WT    TGTGCCATAGACAA**********AGAACATTGGATGG
Mut   TGTGCCATAGACAA***Deletion***AGAACATTGGATGG
Allele-2:    141bp deletion in exon1
```

Genome sequence analysis of PCR products from parental (WT) and SMAD4 Knockdown (KD) 293T cells, using sanger sequencing.