

# SMAD1 Knockout HeLa Cell Lysate, Homozygous

**Catalog No.:** RM02052

## Basic Information

**Catalog No.**

RM02052

**Category**

Cell Lysate

**Parental Cell line**

HeLa

**Genotype**

Knockout

## Gene Information

**Gene Symbol**

SMAD1

**Species**

Human

**Gene ID**

4086

**Swiss Prot**

Q15797

**Synonyms**BSP-1; BSP1; JV4-1; JV41; MADH1;  
MADR1

## Contact

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## Background

The protein encoded by this gene belongs to the SMAD, a family of proteins similar to the gene products of the Drosophila gene 'mothers against decapentaplegic' (Mad) and the C. elegans gene Sma. SMAD proteins are signal transducers and transcriptional modulators that mediate multiple signaling pathways. This protein mediates the signals of the bone morphogenetic proteins (BMPs), which are involved in a range of biological activities including cell growth, apoptosis, morphogenesis, development and immune responses. In response to BMP ligands, this protein can be phosphorylated and activated by the BMP receptor kinase. The phosphorylated form of this protein forms a complex with SMAD4, which is important for its function in the transcription regulation. This protein is a target for SMAD-specific E3 ubiquitin ligases, such as SMURF1 and SMURF2, and undergoes ubiquitination and proteasome-mediated degradation. Alternatively spliced transcript variants encoding the same protein have been observed. [provided by RefSeq, Jul 2008]

## Product Information

**Description**

SMAD1 Knockout HeLa Cell Line is engineered from HeLa cell line with Gene-Editing technology.

Allele-1:61bp deletion in exon1

Allele-2:61bp 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

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WT    TTGAGCTGCCAGG\*\*\*\*\*CGGAAGGGACTGCC  
Mut   TTGAGCTGCCAGG\*\*\*Deletion\*\*\*CGGAAGGGACTGCC  
Allele-1: 61bp deletion in exon1

WT    TTGAGCTGCCAGG\*\*\*\*\*CGGAAGGGACTGCC  
Mut   TTGAGCTGCCAGG\*\*\*Deletion\*\*\*CGGAAGGGACTGCC  
Allele-2: 61bp deletion in exon1

Genome sequence analysis of PCR products from parental (WT) and SMAD1 knockout (KO) HeLa cells, using sanger sequencing.