

# MAP2K2 Knockout HeLa Cell Lysate, Homozygous

**Catalog No.: RM02598**

## Basic Information

**Catalog No.**

RM02598

**Category**

Cell Lysate

**Parental Cell line**

HeLa

**Genotype**

Knockout

## Gene Information

**Gene Symbol**

MAP2K2

**Species**

Human

**Gene ID**

5605

**Swiss Prot**

P36507

**Synonyms**

CFC4; MAPKK2; MEK2; MKK2; PRKMK2

## Contact

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## Background

The protein encoded by this gene is a dual specificity protein kinase that belongs to the MAP kinase kinase family. This kinase is known to play a critical role in mitogen growth factor signal transduction. It phosphorylates and thus activates MAPK1/ERK2 and MAPK2/ERK3. The activation of this kinase itself is dependent on the Ser/Thr phosphorylation by MAP kinase kinases. Mutations in this gene cause cardiofaciocutaneous syndrome (CFC syndrome), a disease characterized by heart defects, mental retardation, and distinctive facial features similar to those found in Noonan syndrome. The inhibition or degradation of this kinase is also found to be involved in the pathogenesis of Yersinia and anthrax. A pseudogene, which is located on chromosome 7, has been identified for this gene. [provided by RefSeq, Jul 2008]

## Product Information

**Description**

MAP2K2 Knockout HeLa Cell Line is engineered from HeLa cell line with Gene-Editing technology.

Allele-1:19bp deletion in exon2

Allele-2:23bp deletion in exon2

Allele-3:83bp 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°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 GAAGAA\*\*\*\*\*CGAAAGG\*\*\*\*\*CGCGGGCAAC  
Mut GAAGAA\*Deletion\*CGAA~~AA~~\*Deletion\*CGCGGGCAAC  
Allele-1: 19bp deletion in exon2

WT CAGAAG\*\*\*\*\*TTC\*\*TGG\*\*\*\*\*CAACGGCGGG  
Mut CAGAAG\*Deletion\*TTC\*\*TGG\*Deletion\*CAACGGCGGG  
Allele-2: 23bp deletion in exon2

WT ACGAGCAGCAGAAG\*\*\*\*\*CGCGGGCAACGGCG  
Mut ACGAGCAGCAGAAG\*\*\*Deletion\*\*\*CGCGGGCAACGGCG  
Allele-3: 83bp deletion in exon2

Genome sequence analysis of PCR products from parental (WT) and MAP2K2 knockout (KO) HeLa cells, using sanger sequencing.