

# IL1B Knockout A549 Cell Lysate, Homozygous

Catalog No.: RM02783

## Basic Information

**Catalog No.**

RM02783

**Category**

Cell Lysate

**Parental Cell line**

A549

**Genotype**

Knockout

## Gene Information

**Gene Symbol**

IL1B

**Species**

Human

**Gene ID**


3553

**Swiss Prot**

P01584

**Synonyms**IL-1; IL1F2; IL1beta; IL1-BETA; IL1 $\beta$ 

## Contact

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## Background

The protein encoded by this gene is a member of the interleukin 1 cytokine family. This cytokine is produced by activated macrophages as a proprotein, which is proteolytically processed to its active form by caspase 1 (CASP1/ICE). This cytokine is an important mediator of the inflammatory response, and is involved in a variety of cellular activities, including cell proliferation, differentiation, and apoptosis. The induction of cyclooxygenase-2 (PTGS2/COX2) by this cytokine in the central nervous system (CNS) is found to contribute to inflammatory pain hypersensitivity. Similarly, IL-1B has been implicated in human osteoarthritis pathogenesis. Patients with severe Coronavirus Disease 2019 (COVID-19) present elevated levels of pro-inflammatory cytokines such as IL-1B in bronchial alveolar lavage fluid samples. The lung damage induced by the Severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) is to a large extent, a result of the inflammatory response promoted by cytokines such as IL-1B. This gene and eight other interleukin 1 family genes form a cytokine gene cluster on chromosome 2.

## Product Information

**Description**

IL1B Knockout cell line is engineered from A549 cell line with Gene-Editing Technology.  
Allele-1:59bp deletion in exon3  
Allele-2:59bp deletion in exon3  
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**50 $\mu$ L, 2 $\mu$ g/ $\mu$ L.**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 $\times$  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 GGCGGCATCCAGCT\*\*\*\*\*CCATGGACAAGCT  
Mut GGCGGCATCCAGCT\*\*\*Deletion\*\*\*CCATGGACAAGCT  
Allele-1: 59bp deletion in exon3

Genome sequence analysis of PCR products from parental (WT) and IL1B knockout (KO) A549 cells, using sanger sequencing.

WT GGCGGCATCCAGCT\*\*\*\*\*CCATGGACAAGCT  
Mut GGCGGCATCCAGCT\*\*\*Deletion\*\*\*CCATGGACAAGCT  
Allele-2: 59bp deletion in exon3