# Active Interleukin 1 Beta (IL1b) Instruction Manual

# SBPA147Mu61

### Mus musculus (Mouse)

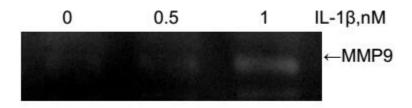
**Buffer Formulation** PBS, pH7.4, containing 5% Trehalose.

**Traits** Freeze-dried powder

Purity > 97% Isoelectric Point 8.4

**Applications** Cell culture; Activity Assays.

## **ACTIVITY TEST**



IL-1β (Interleukin-1 beta) is a proinflammatory and immunoregulatory cytokine involved in a variety of cellular activities. It has been elucidated that IL-1β stimulation of cells activates MMP-9 (matrix metalloproteinases-9) secretion by the activation of the dual signalling pathways. Thus, a stimulation assay of IL-1β was conducted using 3T3 cell line, and the MMP-9 activity was detected through gel zymography. Briefly, 1×106 3T3 cells were cultured overnight in 5%DMEM, washed with serum-free medium and then stimulated with different concentrations of IL-1β for 20h, and cell lysates were collected to measure MMP-9 activity. Cell lysates samples were denatured by SDS loading buffer, electrophoresed through sodium dodecyl sulphate–polyacrylamide gel (SDS–PAGE; 10% gels) containing gelatin (1mg/mL) with nonreducing conditions. After renaturation, incubation and coomassiebrilliant blue (CBB)-stained, MMPs hydrolyzed gelatin nearby, indicated by the white binds on the gel.

Result: Increased MMP-9 activity in 3T3 cells due to the stimulation of IL-1 $\beta$  was shown in Figure 1.

Figure. Activation of MMP-9 by IL-1β.

#### **USAGE**

Reconstitute in 10mM PBS (pH7.4) to a concentration of 0.1-1.0 mg/mL. Do not vortex.

#### **STORAGE**

Avoid repeated freeze/thaw cycles. Store at 2-8°C for one month. Aliquot and store at -80°C for 12 months.

#### **STABILITY**

The thermal stability is described by the loss rate. The loss rate was determined by accelerated thermal degradation test, that is, incubate the protein at 37°C for 48h, and no obvious degradation and precipitation were observed. The loss rate is less than 5% within the expiration date under appropriate storage condition.

#### **Image**

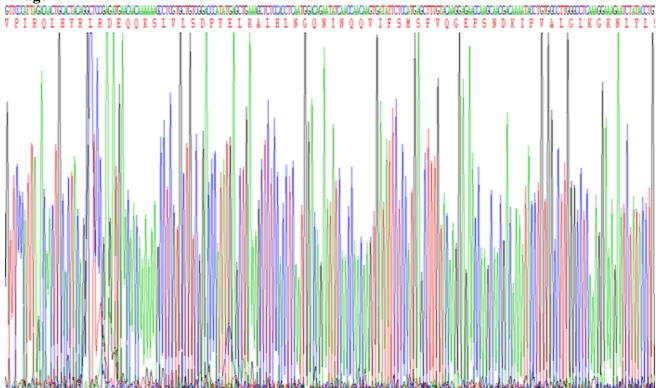


Figure. Gene Sequencing (Extract)

## **Image**

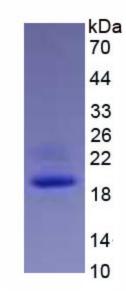


Figure. SDS-PAGE

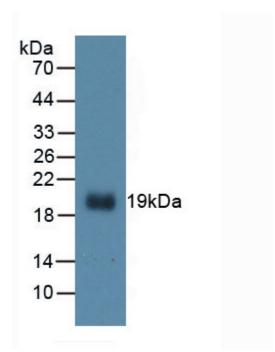


Figure. Western Blot

# [IMPORTANT NOTE]

The kit is designed for research use only, we will not be responsible for any issue if the kit was used in clinical diagnostic or any other procedures.