

# Validation data for recombinant human IL-1 $\beta$ (*E. coli*)

*E. coli*-derived human interleukin 1 beta (IL-1 $\beta$ )

<https://www.invivogen.com/human-il1b>

For research use only

Version 24C19-AK

Interleukin 1 beta (IL-1 $\beta$ ) is a soluble pro-inflammatory cytokine that plays a critical role in the host response to infection and injury. InvivoGen offers a recombinant human IL-1 $\beta$ , produced in *Escherichia coli* (*E. coli*). Its size and purity was assessed using SDS PAGE (Figure 1). The biological activity of IL-1 $\beta$  has been confirmed using InvivoGen's HEK-Blue™ IL-1 $\beta$  cells (Figure 2). Binding of IL-1 $\beta$  to its receptor on the surface of HEK-Blue™ IL-1 $\beta$  cells triggers a signaling cascade leading to the activation NF- $\kappa$ B and the subsequent production of SEAP. Levels of SEAP can be easily measured using QUANTI-Blue™, a detection reagent.

## Detection by SDS-PAGE

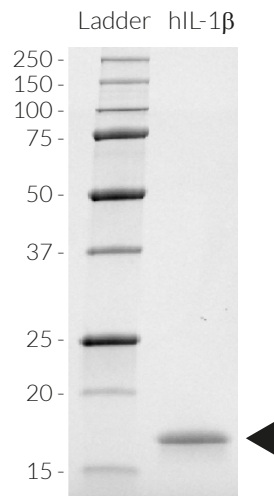


Figure 1. SDS PAGE of the recombinant human (h)IL-1 $\beta$  protein. 2  $\mu$ g of hIL-1 $\beta$  was loaded on a 12% Mini-PROTEAN® TGX Stain-Free™ Precast Gel (Bio-Rad). Detection was performed as per the manufacturer's instructions. A band was detected at ~17 kDa.

## Dose-response in HEK cells to human IL-1 $\beta$

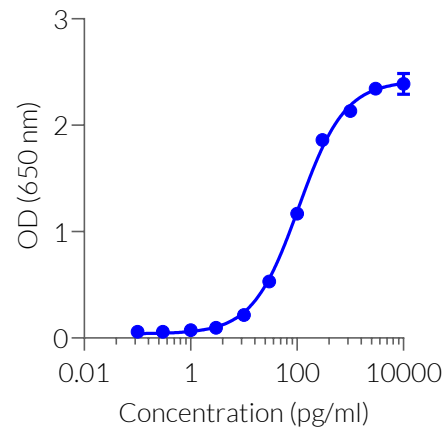


Figure 2. Dose-response in HEK-Blue™ IL-1 $\beta$  cells to recombinant IL-1 $\beta$  cytokine. Cells were stimulated with increasing concentrations of recombinant human IL-1 $\beta$ . After overnight incubation, the NF- $\kappa$ B-induced SEAP activity was determined using QUANTI-Blue™, a SEAP detection reagent. Data are shown as optical density (OD) at 650 nm (mean  $\pm$  SEM).

## TECHNICAL SUPPORT

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