

Validation data for HEK-Blue™ IL-1R cells

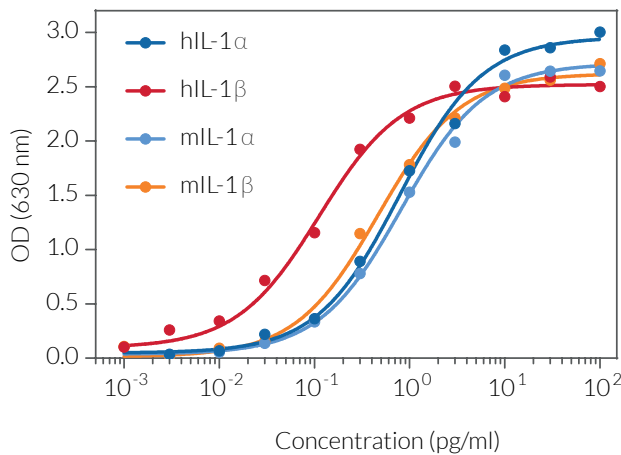
<https://www.invivogen.com/hek-blue-il1r>

For research use only

Version 22C21-MM

HEK-Blue™ IL-1R cells allow the detection of bioactive human and murine interleukin-1 (IL-1 α and IL-1 β) by monitoring NF- κ B and AP-1 activation. These human embryonic kidney 293 (HEK293)-derived cells express an NF- κ B/AP-1-inducible SEAP (secreted embryonic alkaline phosphatase) reporter gene. HEK-Blue™ IL-1R cells display very high sensitivity to hIL-1 β (detection range: 0.1 pg - 100 pg/ml; **figure 1**) and high sensitivity to hIL-1 α , mL-1 α , and mL-1 β (detection range: 1 pg - 100 pg/ml; **figure 1**). Of note, in these cells the response to human TNF- α has been blocked while the response to murine TNF- α remains intact (**figure 2**). HEK-Blue™ IL-1 β cells are non-responsive to hIL-18, hIFN- α , hIFN- β , hIFN- γ , and hTNF- α (**figure 2**).

Cellular response to IL-1 α and IL-1 β



Cytokine	EC ₅₀ (pg/ml)
hIL-1 α	0.7 \pm 0.5
hIL-1 β	0.02 \pm 0.012
mIL-1 α	0.8 \pm 0.5
mIL-1 β	0.6 \pm 0.5

Figure 1. Dose-response of HEK-Blue™ IL-1R cells to recombinant human and murine IL-1 α and IL-1 β . Cells were stimulated with increasing concentrations of recombinant IL-1. After overnight incubation, the NF- κ B/AP-1 response was determined using QUANTI-Blue™ Solution, a SEAP detection reagent, and reading the optical density (OD) at 630 nm. EC50 values are shown as mean \pm SD.

Cell line specificity

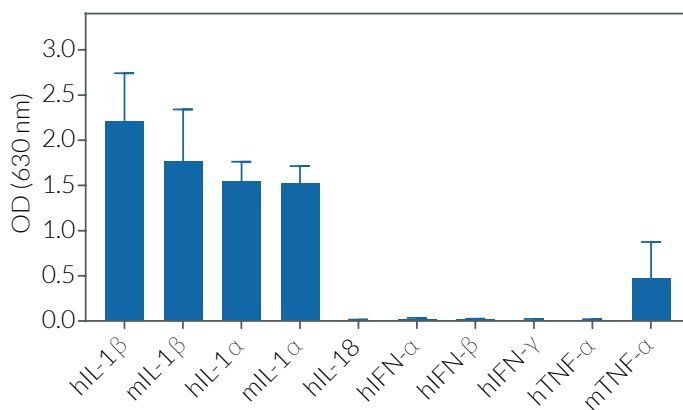


Figure 2. Response of HEK-Blue™ IL-1R cells to a panel of cytokines. Cells were stimulated with various human and murine recombinant cytokines: 1 pg/ml of hIL-1 β , mL-1 β , hIL-1 α , mL-1 α , and 10 ng/ml of hIL-18, hIFN- γ , hTNF- α , or mTNF- α , and 100 U/ml hIFN- α or hIFN- β . After overnight incubation, SEAP activity was assessed using QUANTI-Blue™ Solution. The optical density (OD) at 630 nm is shown as mean \pm SD.

TECHNICAL SUPPORT

InvivoGen USA (Toll-Free): 888-457-5873
InvivoGen USA (International): +1 (858) 457-5873
InvivoGen Europe: +33 (0) 5-62-71-69-39
InvivoGen Asia: +852 3622-3480
E-mail: info@invivogen.com