

# Validation data for HEK-Blue™ IL-2 cells

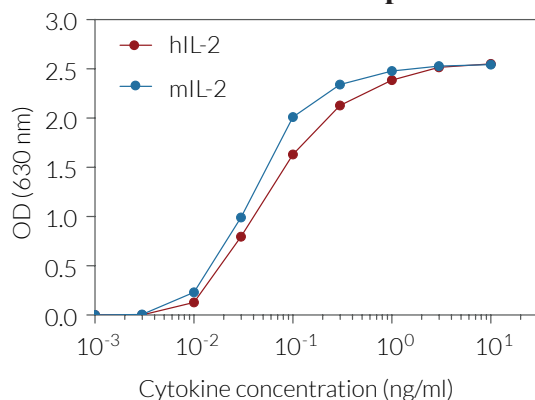
<http://www.invivogen.com/hek-blue-il2>

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Version 18K28-MM

HEK-Blue™ IL-2 cells allow the detection of bioactive human and murine IL-2 by monitoring the activation of the STAT-5 pathway. They were generated by the stable transfection of HEK293 cells with the human IL-2R genes and a STAT5-inducible SEAP (secreted embryonic alkaline phosphatase) reporter gene. These cells can be used to study the functionality of recombinant native (figure 1) or engineered human and murine IL-2. They can also be used to screen for molecules that inhibit IL-2 signaling such as antibodies targeting IL-2 or IL-2R and inhibitors of JAK1/JAK3. The response of this cell line to IL-2 and other cytokines has been determined (figure 2). Of note, a weak response to other STAT5-activating cytokines such as IFN- $\gamma$  can be observed.

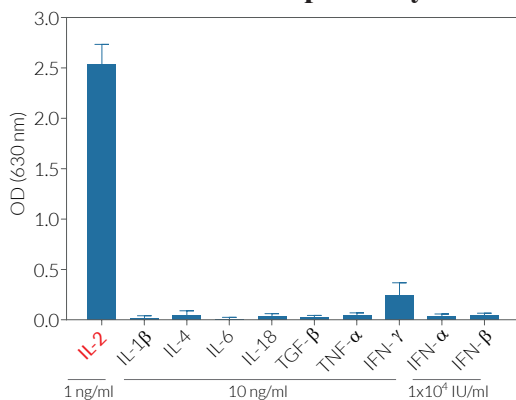
## Evaluation of IL-2 response



Cytokine	EC <sub>50</sub> (ng/ml)
● hIL-2	0.064 ± 0.034
● mIL-2	0.037 ± 0.013

**Figure 1. Dose-response of HEK-Blue™ IL-2 cells to recombinant IL-2.** Cells were stimulated with increasing concentration of recombinant human and murine IL-2. After overnight incubation, the STAT5 response was determined using QUANTI-Blue™, a SEAP detection reagent, and reading the optical density (OD) at 630 nm. EC<sub>50</sub> values are shown in the table above as mean ± SD.

## Evaluation of specificity



**Figure 2. Cytokine response profile of HEK-Blue™ IL-2 cells.** Cells were stimulated with various human recombinant cytokines; 1 ng IL-2 and 10 ng/ml IL-1 $\beta$ , IL-4, IL-6, IL-18, TGF- $\beta$ , TNF- $\alpha$ , IFN- $\gamma$ , and 1x10<sup>4</sup> IU/ml IFN- $\alpha$ , IFN- $\beta$ . After overnight incubation, SEAP activity was assessed using QUANTI-Blue™.

### TECHNICAL SUPPORT

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