

# Validation data for HEK-Blue™ IL-22 cells

<https://www.invivogen.com/hek-blue-il22>

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Version 19H06-MM

HEK-Blue™ IL-22 cells allow the detection of bioactive human interleukin-22 (hIL-22) and murine IL-22 (mIL-22) by monitoring STAT3 activation. They were generated by stable transfection of HEK293 cells with the genes encoding the IL-22 receptor, STAT3, and a STAT3-inducible SEAP (secreted embryonic alkaline phosphatase) reporter. These cells display high sensitivity to hIL-22 and mIL-22 (figures 1 & 2). Of note, as HEK293 and HEK-Blue™ IL-22 cells endogenously express the interferon- $\alpha/\beta$  receptor, they display a strong response to type 1 interferons (IFNs; figure 2). These cells can also be used for the screening of anti-IL-22 antibodies (figure 3).

## Evaluation of cellular response to IL-22

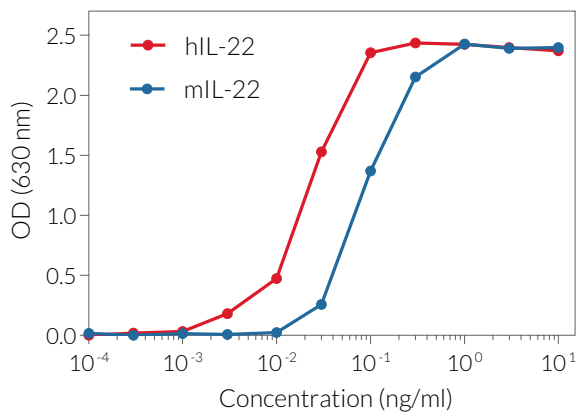


Figure 1. Dose-response of HEK-Blue™ IL-22 cells to recombinant IL-22. Cells were stimulated with increasing concentrations of recombinant human or murine IL-22. After overnight incubation, the STAT3 response was determined using QUANTI-Blue™ Solution, a SEAP detection reagent, and reading the optical density (OD) at 630 nm. EC<sub>50</sub> values are shown as mean ± SD.

## Evaluation of specificity

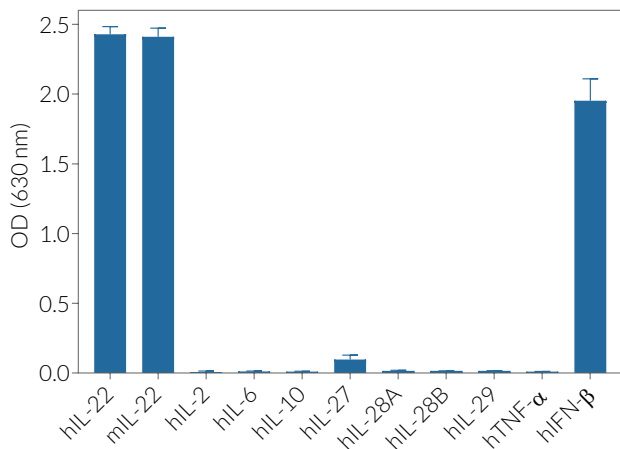


Figure 2. Cytokine response of HEK-Blue™ IL-22 cells. Cells were stimulated with various human and murine recombinant cytokines: 1 ng/ml of hIL-22, mIL-22, hIL-2, hIL-6, hIL-10, hIL-27, hIL-28A, hIL-28B, hIL-29, hTNF- $\alpha$ , 1x10<sup>3</sup> hIFN- $\beta$ . After overnight incubation, SEAP activity was assessed using QUANTI-Blue™ Solution.

## Evaluation of IL-22 signaling inhibition

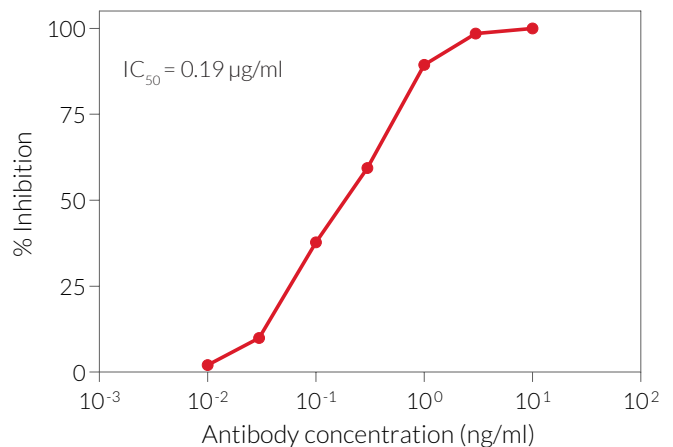


Figure 3. Dose-dependent inhibition of HEK-Blue™ IL-22 cellular response using a neutralizing antibody against the IL-22 receptor (IL-22R). The antibody was incubated with HEK-Blue™ IL-22 cells for 30 minutes prior to the addition of hIL-22 (10 ng/ml). After overnight incubation, SEAP activity in the cell culture supernatant was assessed using QUANTI-Blue™ Solution. Data represent % inhibition of reporter activity without the anti-IL-22R antibody.

### TECHNICAL SUPPORT

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