

Validation data for HEK-Blue™ IL-17 cells

<https://www.invivogen.com/hek-blue-il17>

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Version 19G30-MM

HEK-Blue™ IL-17 cells allow the detection of bioactive human (hIL-17A), hIL-17E (IL-25) and hIL-17F, by monitoring NF-κB and AP-1 activation. They were generated by stable transfection of HEK293 cells with the genes encoding the IL-17A and IL-17F heterodimeric receptor (IL-17RA/IL-17RC), the Act1 adaptor molecule, as well as an NF-κB- and AP-1-inducible SEAP (secreted embryonic alkaline phosphatase) reporter. The response of this cell line to members of the IL-17 family and other cytokines has been determined (figures 1 & 2). Of note, HEK-Blue™ IL-17 also respond to murine IL-17E (mIL-17E) and display little to no response to mIL-17A and mIL-17F (figure 2). They do not respond to human nor murine IL-17C. Due to the TNF receptor and MyD88 gene knockout, these cells do not respond to TNF-α or IL-1β (figure 2).

Evaluation of cellular response to IL-17

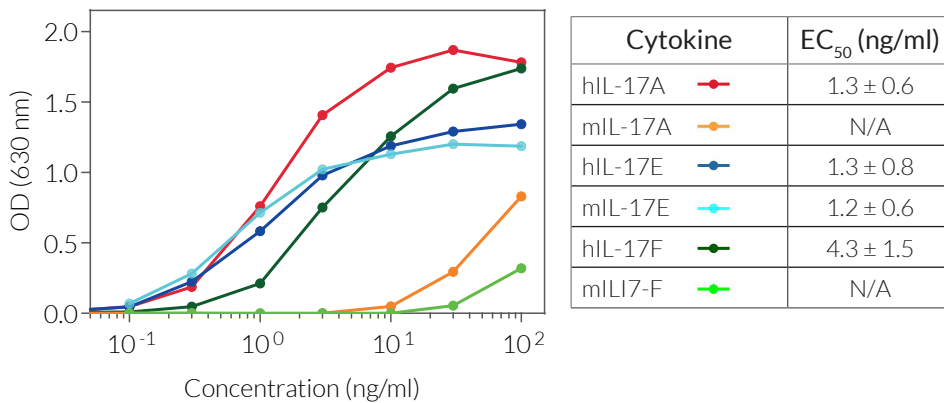


Figure 1. Dose-response of HEK-Blue™ IL-17 cells to recombinant IL-17 cytokines. Cells were stimulated with increasing concentrations of recombinant human or murine IL-17A, IL-17E, and IL-17F. After overnight incubation, the NF-κB response was determined using QUANTI-Blue™ Solution, a SEAP detection reagent, and reading the optical density (OD) at 630 nm. EC₅₀ values are shown as mean ± SD.

Cytokine response

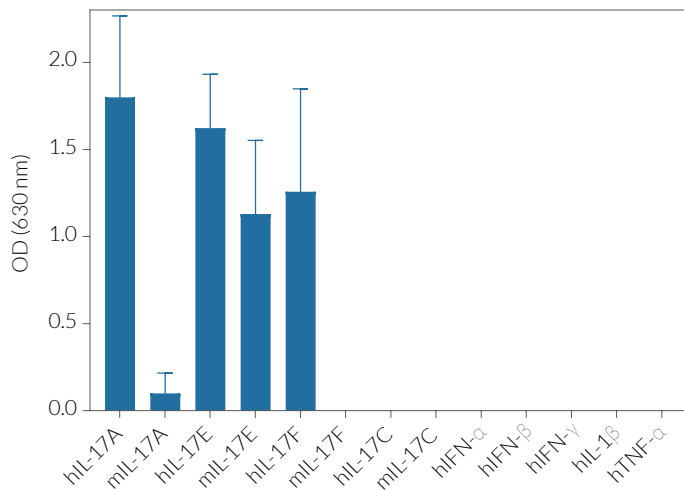


Figure 2. Cytokine response profile of HEK-Blue™ IL-17 cells. Cells were stimulated with various human and murine recombinant cytokines: 10 ng/ml of hIL-17A, mIL-17A, hIL-17E, mIL-17E, hIL-17F, mIL-17F, hIL-17C, mIL-17C, 1x10⁴ IU/ml of hIFN-α, hIFN-β, 100 ng/ml of hIFN-γ, and 1 ng/ml of hIL-1β and hTNF-α. After overnight incubation, SEAP activity was assessed using QUANTI-Blue™ Solution. HEK-Blue™ IL-17C cells do not respond to hIL-17B nor hIL-17D (data not shown).

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 Hong Kong: +852 3622-3480
 E-mail: info@invivogen.com