

Validation data for HEK-Blue™ TSLP Cells

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

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Version 24H26-NJ

HEK-Blue™ TSLP cells allow the detection of bioactive thymic stromal lymphopoietin (TSLP) by monitoring STAT5 activation. These human embryonic kidney 293 (HEK293)-derived cells express the human TSLP heterodimeric receptor, comprising the TSLPR and IL-7R α subunits. They also express human STAT5b, and a STAT5-inducible secreted embryonic alkaline phosphatase (SEAP) reporter. HEK-Blue™ TSLP cells respond to human but not murine TSLP (Figure 1). These cells can be used for screening of antibodies targeting the TSLP pathway (Figure 2). Of note, HEK-Blue™ TSLP cells also respond, to a weaker extent, to human IFN- γ . However, they do not respond to other STAT5-signaling cytokines: IL-2, IL-7, IL-9, and IL-15 (Figure 3).

Cellular response to TSLP

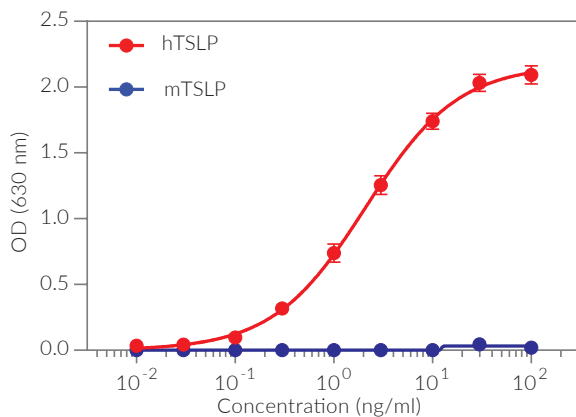


Figure 1. Dose-response of HEK-Blue™ TSLP cells to recombinant TSLP. Cells were stimulated with increasing concentrations of recombinant human TSLP (hTSLP) and murine TSLP (mTSLP). After overnight incubation, the STAT5-induced response was determined using QUANTI-Blue™ Solution, a SEAP detection reagent. The optical density (OD) at 630 nm is shown as mean \pm SEM.

TSLP signaling inhibition

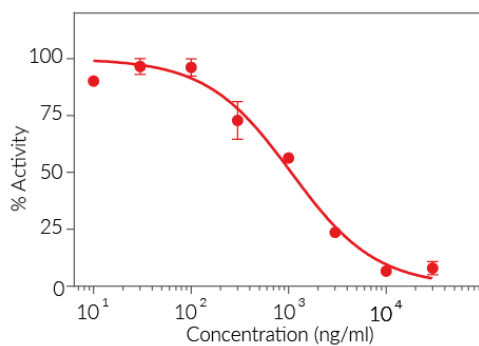


Figure 2. Dose-dependent inhibition of HEK-Blue™ TSLP cellular response using a neutralizing antibody against human TSLP. An increasing concentration of a neutralizing anti-hTSLP antibody was incubated with recombinant human TSLP (3 ng/ml) for 2 hours before the addition of HEK-Blue™ TSLP cells. After overnight incubation, SEAP activity in the cell culture supernatant was assessed using QUANTI-Blue™. Data are shown as a percentage (%) of activity, mean \pm SEM.

Cell line specificity

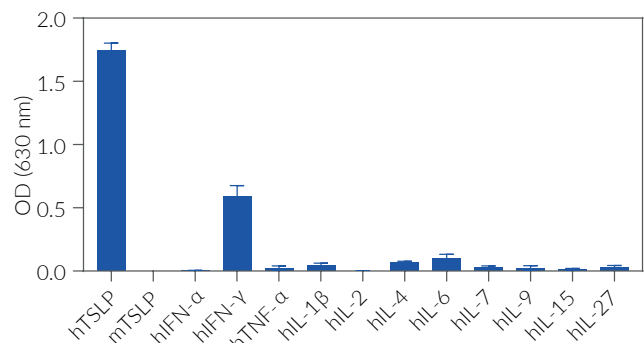


Figure 3. Response of HEK-Blue™ TSLP cells to a panel of cytokines. Cells were stimulated with various human and murine recombinant cytokines: 10 ng/ml of hTSLP, mTSLP, hIFN- γ , hTNF- α , hIL-1 β , hIL-2, hIL-4, hIL-6, hIL-7, hIL-9, hIL-15, hIL-27 and 1000 U/ml hIFN- α . After overnight incubation, SEAP activity was assessed using QUANTI-Blue™. The OD at 630 nm is shown as mean \pm SEM.

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



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