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

https://www.invivogen.com/hek-blue-il1b

For research use only

Version 21H18-MM

HEK-Blue™ IL-1β cells allow the detection of bioactive human interleukin-1β (hIL-1β) by monitoring NF-kB and AP-1 activation. These human embryonic kidney HEK293 derived cells express an NF-κB/AP-1-inducible SEAP (secreted embryonic alkaline phosphatase) reporter gene. HEK-Blue™ IL-1β cells display high sensitivity to human IL-1β (detection range: 0.01-100 ng/ml) and low sensitivity to murine IL-1β (detection range: 10-1000 ng/ml) **(Figure 1)**. They can detect both IL-1α and IL-1β, as these cytokines bind to the same receptor, IL-1R1. Of note, HEK-Blue™ IL-1β cells show no response to human or murine TNF-α , flagellin, or Poly(I:C) **(Figure 2)**. These cells can be used for screening antibodies targeting the IL-1β/IL-1R1 pathway **(Figure 3).**

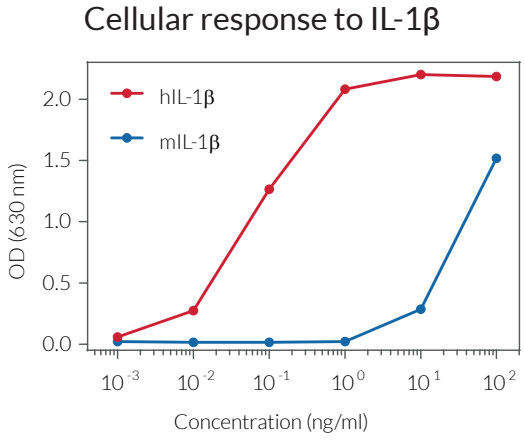

Figure 1. Dose-response of HEK-Blue™ IL-1β cells to recombinant IL-1β. Cells were stimulated with increasing concentrations of recombinant human (h) or murine (m) IL-1β. After overnight incubation, the NF-κB/AP-1 response was determined using QUANTI-Blue™ Solution, a SEAP detection reagent, and reading the optical density (OD) at 630 nm.

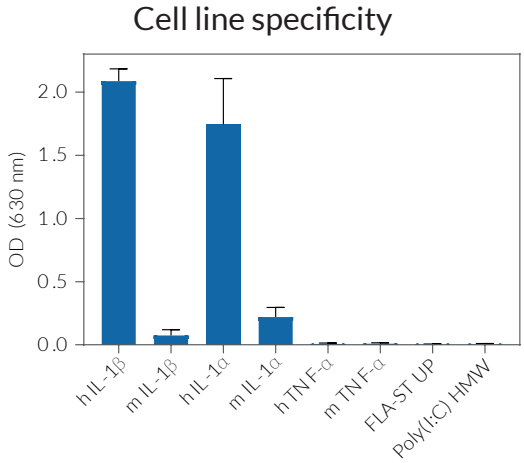

Figure 2. Response of HEK-Blue™ IL-1β cells to IL-1β and IL-1α. Cells were stimulated with 1 ng/ml of hIL-1β, mIL-1β, hIL-1α, mIL-1α, 100 ng/ml of hTNF-α, mTNF-α, ultrapure flagellin from *S. typhimurium* (FLA-ST UP) or 300 ng/ml of Poly(I:C) HMW. After overnight incubation, SEAP activity was assessed using QUANTI-Blue™ Solution. OD at 630 nm is shown as mean ± SEM.

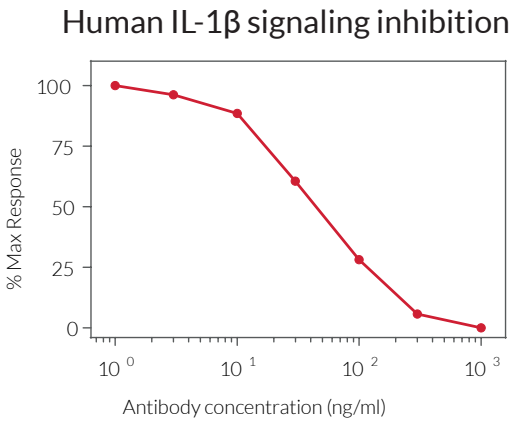

Figure 3. Dose-dependent inhibition of HEK-Blue™ IL-1β cellular response using a neutralizing antibody against hIL-1β. The anti-hIL1β antibody was incubated with the cells for 30 minutes prior to the addition of hIL-1β (1 ng/ml). After overnight incubation, SEAP activity in the cell culture supernatant was assessed using QUANTI-Blue™ Solution. Data represent % of maximal reporter activity without the anti-hIL1β antibody.

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

FAQ Any questions about our cell lines? Visit our FAQ page.

InvivoGen
www.invivogen.com