Validation data for HEK-Blue™ IFN-α/β cells

https://www.invivogen.com/hek-blue-ifn-ab

For research use only

Version 23I12-AK

HEK-Blue™ IFN-α/β cells allow the detection of bioactive type I interferons IFN-α and IFN-β by monitoring the activation of the JAK/STAT/ISGF3 pathway. These cells were generated by the stable transfection of HEK293 cells with the human STAT2 and IRF9 genes to obtain a fully active IFN-α/β signaling pathway. They also express a SEAP reporter gene under the control of the IFN-inducible ISG54 promoter. These cells respond strongly to both human IFN-α and IFN-β **(Figure 1)**. Of note, HEK-Blue™ IFN-α/β cells do not respond to either type III IFNs (IFN-λ) or type II IFN (IFN-γ). However, they respond poorly to murine (m) type I IFNs **(Figure 2).** These cells can also be used to screen for molecules that inhibit IFN-α/β signaling, such as antibodies targeting IFN-α **(Figure 3).**

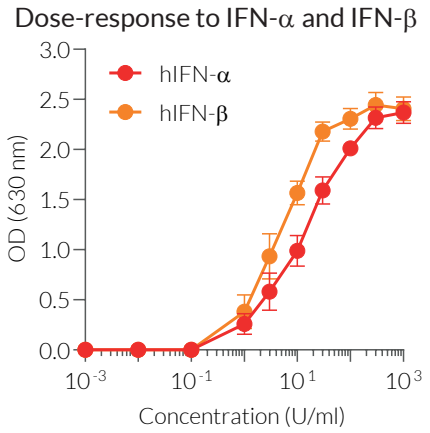

Figure 1. Dose-response of HEK-Blue™ IFN-α/β cells to recombinant type I IFNs. Cells were stimulated with increasing concentrations of recombinant human (h)IFN-α and hIFN-β. After overnight incubation, the ISGF3 response was determined using QUANTI-Blue™ Solution, a SEAP detection reagent. The optical density (OD) at 630 nm is shown as mean ± SEM.

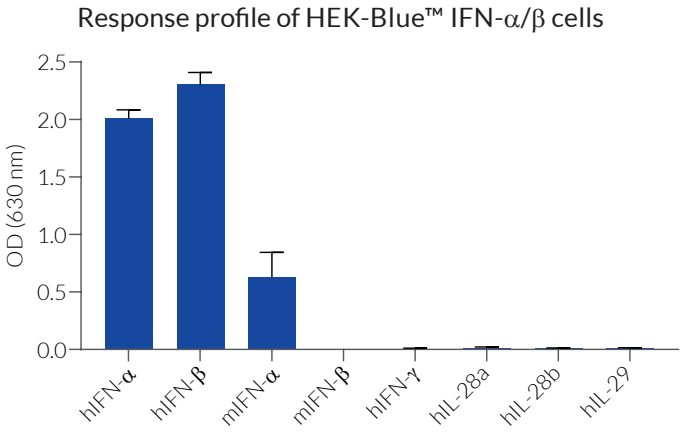

Figure 2. Response of HEK-Blue™ IFN-α/β cells to a panel of cytokines. Cells were stimulated with various human recombinant cytokines: 100 U/ml hIFN-α2b or hIFN-β-1a, 10000 U/ml mIFN-α or mIFN-β, 100 ng/ml IFN-γ, 100 ng/ml IL-28a, IL-28b, or IL-29. After overnight incubation, SEAP activity was assessed using QUANTI-Blue™ Solution. The optical density (OD) at 630 nm is shown as mean ± SEM.

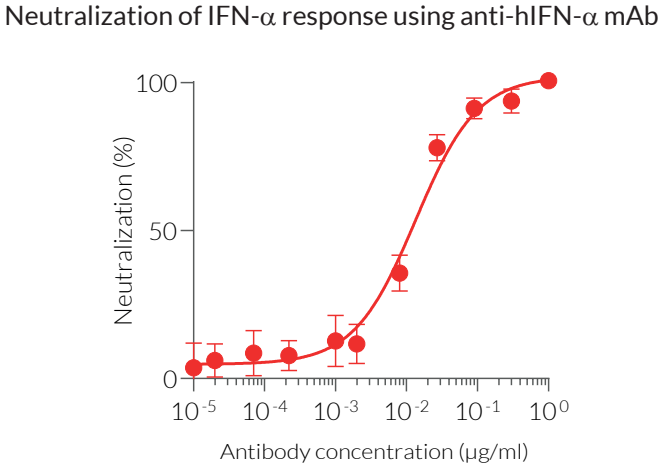

Figure 3. Dose-dependent inhibition of HEK-Blue™ IFN-α/β cell response using Anti-IFN-α-IgG. A serial dilution of Anti-IFN-α-IgG monoclonal antibody (mAb) was incubated with 500 U/ml of recombinant human IFN-α2b for 30 minutes prior to the addition of the HEK-Blue™ IFN-α/β cells. After overnight incubation, the ISGF3 response was determined using QUANTI-Blue™ Solution, a SEAP detection reagent. Data are presented as percentage of neutralization (mean ± 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

InvivoGen
www.invivogen.com