

Validation data for B16-Blue™ IFN- α/β cells

<https://www.invivogen.com/b16-blue-ifnab>

For research use only

Version 21F18-MM

B16-Blue™ IFN- α/β cells allow the detection of bioactive murine type I interferons (i.e. mIFN- α and mIFN- β) by monitoring the activation of the JAK/STAT/ISGF3 pathway and/or IRF3 pathway. These cells derive from the murine B16 melanoma cell line of C57BL/6 origin after stable transfection with a SEAP (secreted embryonic alkaline phosphatase) reporter gene under the control of the IFN- α/β -inducible ISG54 promoter. B16-Blue™ IFN- α/β cells respond specifically to mIFN- α/β in a dose-dependent manner (figure 1) and do not respond to human IFN- α/β (figure 2). Furthermore, due to the inactivation of the IFN- γ receptor, they do not respond to mIFN- γ (figure 2). Stimulation of these cells with type I IFN inducers, such as poly(dA:dT) delivered intracellularly, triggers the production of SEAP by the activation of the IRF-inducible promoter (figure 2).

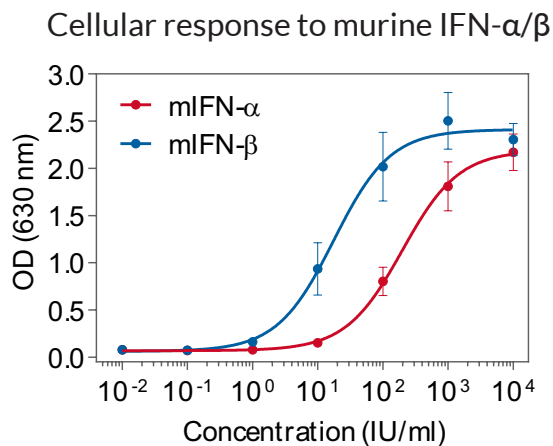


Figure 1. Dose-response of B16-Blue™ IFN- α/β cells to recombinant murine IFN- α/β . Cells were stimulated with increasing concentrations of recombinant murine IFN- α A (also known as mIFN- α 3) and mIFN- β . After overnight incubation, the ISGF3 response was determined using QUANTI-Blue™ Solution, a SEAP detection reagent, and reading the optical density (OD) at 630 nm. The OD at 630 nm is shown as mean \pm SEM.

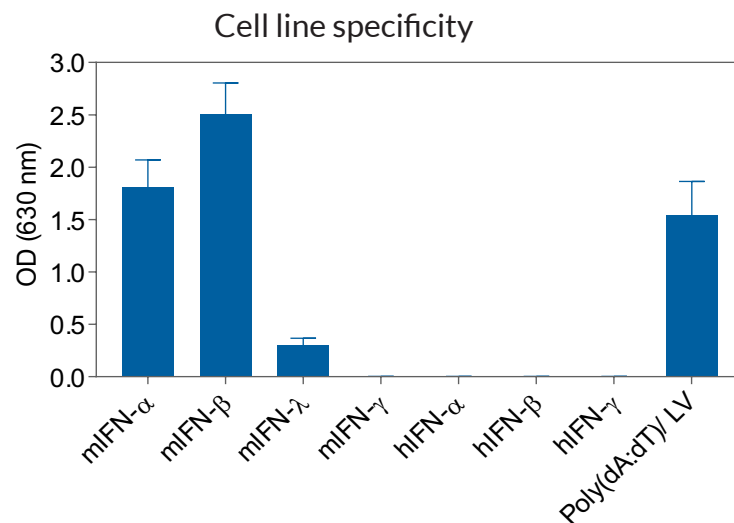


Figure 2. Response of B16-Blue™ IFN- α/β cells to a panel of cytokines. Cells were stimulated with various human and murine recombinant cytokines: 1000 IU/ml mIFN- α A, mIFN- β , human IFN- α 2a (hIFN- α 2a), hIFN- β , 100 ng/ml of mIFN- λ , mIFN- γ , hIFN- γ , or 1 μ g/ml of the type I IFN inducer poly(dA:dT) complexed extemporaneously with the transfection reagent LyoVec™ (Poly(dA:dT)/LV). After overnight incubation, SEAP activity was assessed using QUANTI-Blue™ Solution. The OD at 630 nm is shown as mean \pm SEM.

TECHNICAL SUPPORT

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