

Validation data for HEK-Blue™ TGF-β cells

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

For research use only

Version 21J14-NJ

HEK-Blue™ TGF-β cells allow the detection of bioactive human and murine TGF-β by monitoring the activation of the TGF-β/Smad pathway. These human embryonic kidney 293 (HEK293)-derived cells express a Smad-inducible secreted embryonic alkaline phosphatase (SEAP) reporter. HEK-Blue™ TGF-β cells respond to both human and murine TGF-β in a similar dose-dependent manner (Figure 1). They also respond to three tested isoforms of human TGF-β, as well as to murine TGF-β. They do not respond to Smad-independent cytokines such as hTNFα and hIL-1β (Figure 2). HEK-Blue™ TGF-β cells can also be used to screen for molecules that inhibit TGF-β signaling such as antibodies targeting TGF-β (Figure 3).

Cellular response to TGF-β

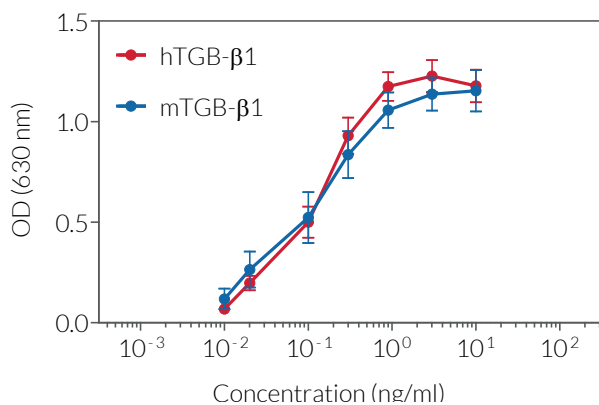


Figure 1. Dose-response of HEK-Blue™ TGF-β cells to recombinant TGF-β. Cells were stimulated with increasing concentrations of recombinant human TGF-β1 (hTGF-β1) and murine TGF-β1 (mTGF-β1). After overnight incubation, the TGF-β/Smad response was determined using QUANTI-Blue™ Solution, a SEAP detection reagent. The optical density (OD) at 630 nm is shown as mean ± SEM.

Cell line specificity

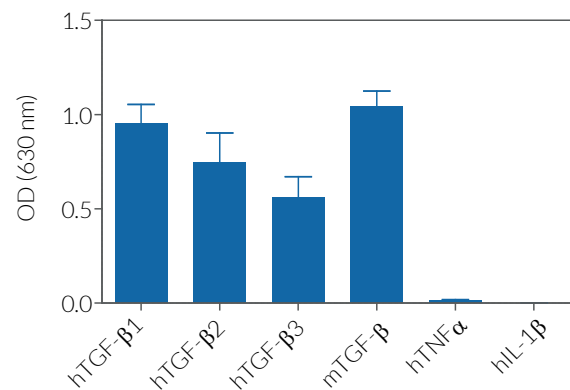


Figure 2. Response of HEK-Blue™ TGF-β cells to a panel of cytokines. Cells were stimulated with various human and murine recombinant cytokines: 0.9 ng/ml of hTGF-β1, hTGF-β2, hTGF-β3, or mTGF-β, and 100 ng/ml hTNF-α or hIL-1β. After overnight incubation, SEAP activity was assessed using QUANTI-Blue™ Solution. The optical density (OD) at 630 nm is shown as mean ± SEM.

Inhibition of TGF-β-induced response

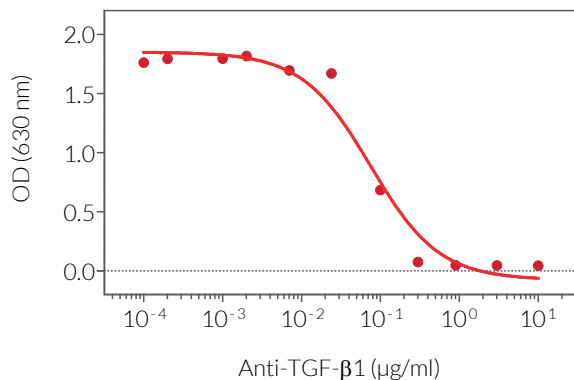


Figure 3. Dose-dependent inhibition of HEK-Blue™ TGF-β cell response using Anti-TGF-β-IgG. A serial dilution of Anti-TGF-β was incubated with 3 ng/ml of hTGF-β1 for 30 minutes prior to the addition of HEK-Blue™ TGF-β cells. After overnight incubation, the TGF-β/Smad response was determined using QUANTI-Blue™ Solution. The optical density (OD) at 630 nm is shown as mean ± SEM.

TECHNICAL SUPPORT

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