Validation data for THP1-Blue™ NF-κB cells

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Version 24B08-AK

THP1-Blue™ NF-κB cells were specifically designed for monitoring the NF-κB signal transduction pathway in a physiologically relevant cell line. THP1-Blue™ cells were derived from the human THP-1 monocyte cell line by stable integration of an NF-κB-inducible SEAP (secreted embryonic alkaline phosphatase) reporter construct. As a result, THP1-Blue™ NF-κB cells allow the monitoring of NF-κB activation by assessing the activity of the SEAP. The level of SEAP in the cell culture supernatant is readily assessed with QUANTI-Blue™, a SEAP detection reagent. As THP-1 cells endogenously express many pattern-recognition receptors (PRRs), THP1-Blue™ NF-κB cells are highly responsive to PRR agonists that trigger the NF-κB pathway **(Figure 1)**.

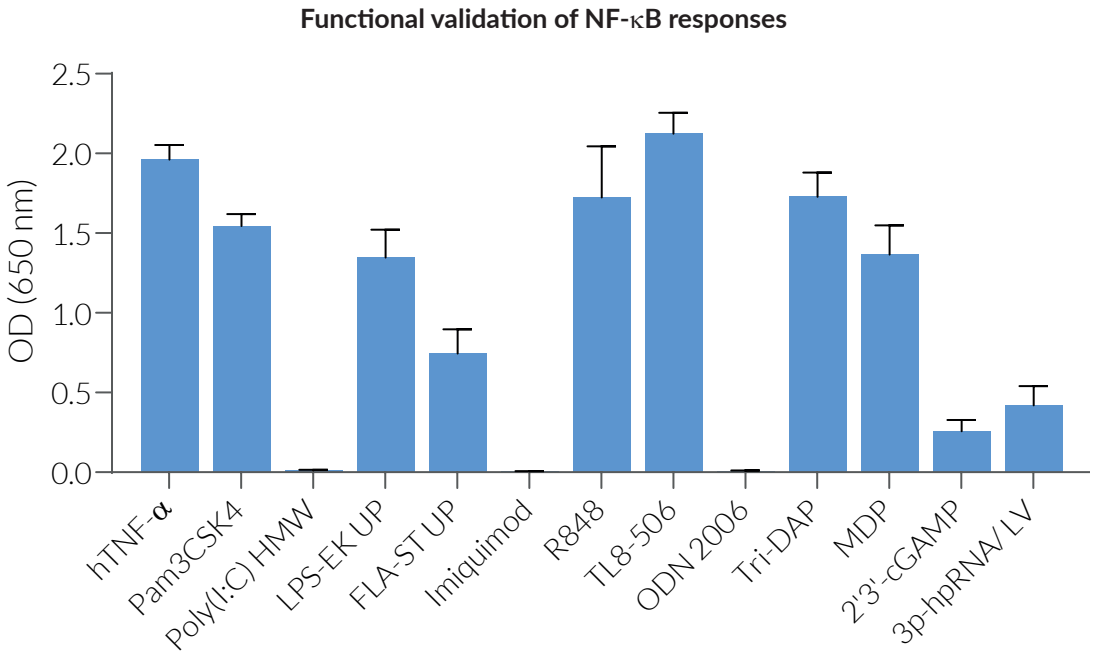

Figure 1. NF-κB responses in THP1-Blue™ NF-κB cells. Cells were incubated for 24 hours with various PRR ligands: Pam3CSK4 (TLR2 ligand, 1 ng/ml), Poly(I:C) HMW (TLR3 ligand, 10 µg/ml), LPS-EK Ultrapure (UP) (TLR4 ligand, 1 ng/ml), FLA-ST UP (TLR5 ligand, 1 ng/ml), Imiquimod (TLR7 ligand, 10 µg/ml), R848 (TLR7/8 ligand, 10 µg/ml), TL8-506 (TLR8 ligand, 1 µg/ml), ODN 2006 (TLR9 ligand, 10 µg/ml), Tri-DAP (NOD1 ligand, 10 µg/ml), MDP (NOD2 ligand, 10 µg/ml), 2'3'-cGAMP (STING ligand, 10 µg/ml), and 3p-hpRNA complexed with LyoVec™ (LV) (RIG-I ligand, 1 µg/ml). Human TNF-α (1 ng/ml) was used as an NF-κB-positive control. After 24h incubation, the NF-kB-induced SEAP activity was assessed. Data are shown as OD at 650 nm (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