Validation data for LPS-RS Ultrapure

https://www.invivogen.com/lps-rs

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Version 23F14-AK

Lipopolysaccharide (LPS)-RS from the photosynthetic bacterium *Rhodobacter sphaeroides* is a potent antagonist of LPS from pathogenic bacteria. LPS-RS does not induce TLR4 signaling but is detected by the LAL assay, the standard endotoxin detection assay. LPS-RS Ultrapure (UP) is extracted by successive enzymatic hydrolysis steps and purified by the previously described phenol-TEA-DOC extraction protocol. This process removes contaminating lipoproteins. Therefore LPS-RS UP inhibits LPS-induced TLR4 signaling without activating TLR2 or TLR4, as verified using InvivoGen's HEK-Blue™ hTLR2 and HEK-Blue™ hTLR4 cells **(Figures 1 & 2)**.

Dose-dependent activation of TLR2 and TLR4

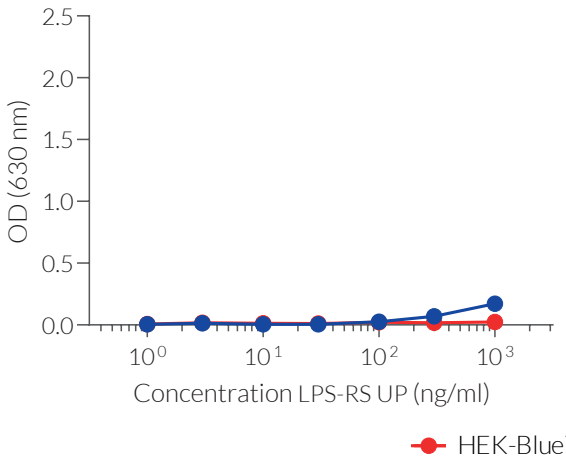

Figure 1. LPS-RS Ultrapure (UP) does not activate both human (h)TLR2 and TLR4. The cells were incubated with increasing concentrations of LPS-RS UP. After overnight incubation in HEK-Blue™ detection medium, a SEAP detection growth medium, the response of hTLR2 and hTLR4 was assessed by determining the presence of SEAP in the supernatant. Data are expressed as optical density at 630 nm (±SEM).

Dose-dependent inhibition of LPS-induced TLR4 activation

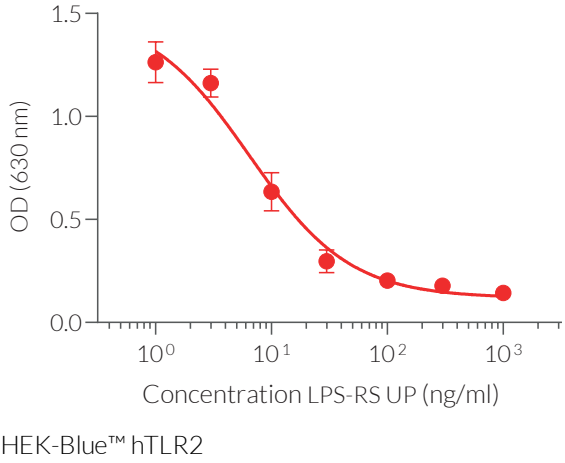

Figure 2. LPS-RS UP is a potent antagonist of LPS-EK UP. The cells were treated with 0.3 ng/ml LPS-EK UP and increasing concentrations of LPS-RS UP. After overnight incubation, the inhibition of LPS-induced hTLR4 activation was assessed by determining the presence of SEAP in the supernatant using QUANTI-Blue™ Solution. Data are expressed as optical density at 630 nm (±SEM).

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