

Validation data for recombinant human IL-4

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Interleukin 4 (IL-4) is a cytokine that plays an important role in regulating inflammation and immune responses. Its size and purity was assessed using SDS-PAGE (Figure 1). The biological activity of IL-4 is confirmed using HEK-Blue™ IL-4/IL-13 cells featuring a STAT6-inducible SEAP reporter (Figure 2). Recombinant human IL-4 can be used together with HEK-Blue™ IL-4/IL-13 cells for the screening of inhibitory molecules, such as Dupilumab, a human IgG4 (S228P) monoclonal antibody targeting the IL-4R α subunit of the IL-4 receptor (Figure 3).

Human IL-4 SDS-PAGE analysis

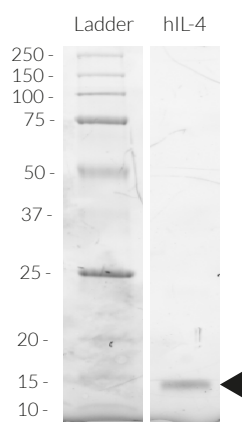


Figure 1. SDS- PAGE analysis of the recombinant human (h)IL-4. 1.5 μ g of hIL-4 was loaded on a 12% Mini-PROTEAN® TGX Stain-Free™ Precast Gel (Bio-Rad). Detection was performed as per the manufacturer's instructions. A band was detected at ~15 kDa.

Cellular response to human IL-4

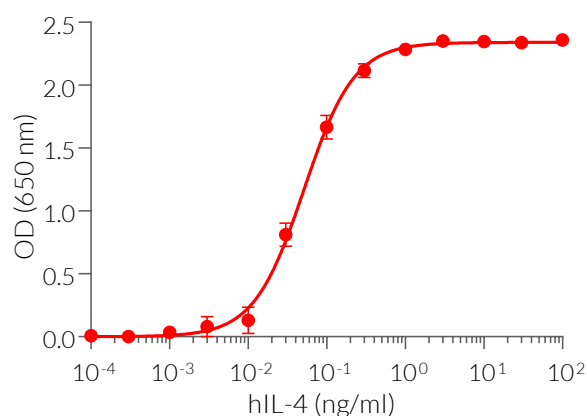


Figure 2. Dose-response of HEK-Blue™ IL-4/IL-13 cells to recombinant human IL-4. HEK-Blue™ IL-4/IL-13 cells (cat code: [hkb-il413](#)) were stimulated with increasing concentrations of recombinant human IL-4. After overnight incubation, the STAT6-induced SEAP activity was determined using QUANTI-Blue™, a SEAP detection reagent. Data are shown as optical density (OD) at 650 nm (mean \pm SEM).

Neutralization of IL-4 signaling using Dupilumab

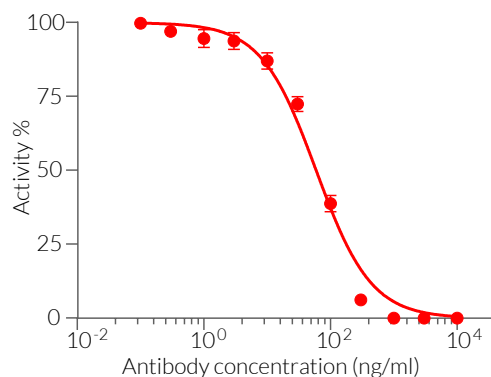


Figure 3. Dose-dependent inhibition of IL-4 signaling using Dupilumab biosimilar. HEK-Blue™ IL-4/IL13 cells (cat code: [hkb-il413](#)) were incubated with increasing concentrations of Anti-hIL-4R-hlgG4 (S228P) ([hil4r-mab14](#)) (0.1 ng/ml - 10 μ g/ml) for 1 h before the addition of recombinant human IL-4 (1 ng/ml). After overnight incubation, SEAP activity in the cell culture supernatant was assessed using QUANTI-Blue™ Solution. Data are shown in percentage of activity (%) (mean \pm SEM).

TECHNICAL SUPPORT

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