CacoGoblet as an anti-inflammatory drug screening tool
Experimental Data

ReadyCell offers **CacoGoblet**, a ready-to-use 21-day differentiated co-culture of human colon carcinoma cell lines (Caco-2 and HT-29) grown in 24-insert permeable supports to screen for compound gastrointestinal (GI) anti-inflammatory properties. The approach is based on the correlation between gut inflammation and the evaluation of two indicators of cell barrier integrity, the Transepithelial Electrical Resistance (TEER) and the Lucifer Yellow (LY) Paracellular Permeability.

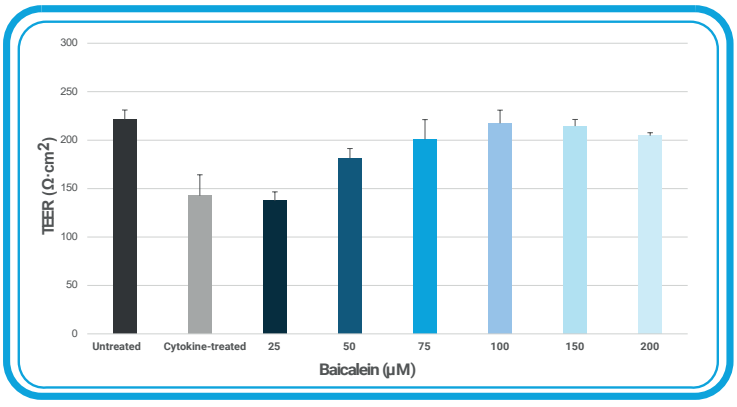

Figure 1. *TEER measurements in 72-hr cytokine-induced CacoGoblet cells incubated in the absence/presence of increasing concentrations of Baicalein, a reference anti-inflammatory compound.*

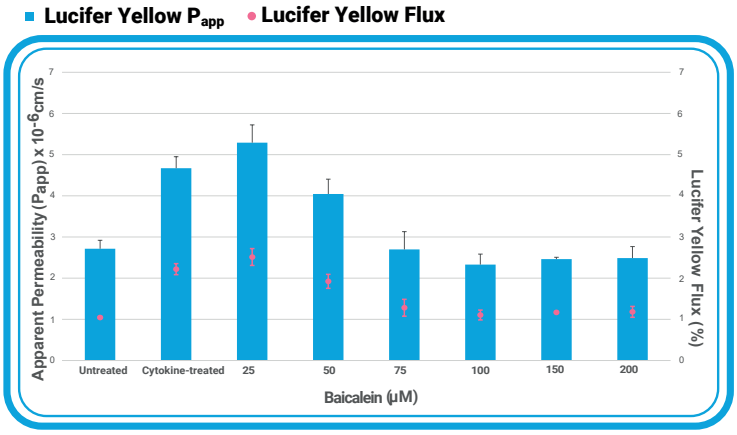

Figure 2. *LY P_{app}/Flux in 72-hr cytokine-induced CacoGoblet cells incubated in the absence/presence of increasing concentrations of Baicalein, a reference anti-inflammatory compound.*

Comparison to interleukin-8 (IL-8) secretion

Cell barrier integrity quantified through TEER and LY P_{app}/Flux was compared to IL-8 release. This proinflammatory cytokine has been demonstrated to contribute to acute and chronic GI inflammatory processes, and it is used as a marker of gut inflammation.

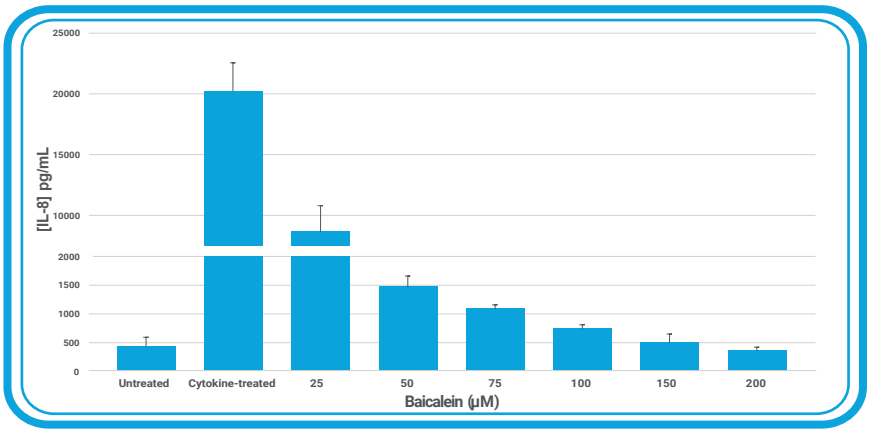

Figure 3. *Measurement of IL-8 secretion by enzyme-immunoabsorbent assay (ELISA) after 72-hr of CacoGoblet exposure to a cocktail of cytokines in the absence/presence of increasing concentrations of Baicalein.*

Batch-to-batch variation

Figures 4-6 show variability among batches. TEER, LY P_{app}/Flux, and IL-8 release in cytokine-induced CacoGoblet cells result from 3 independent experiments.

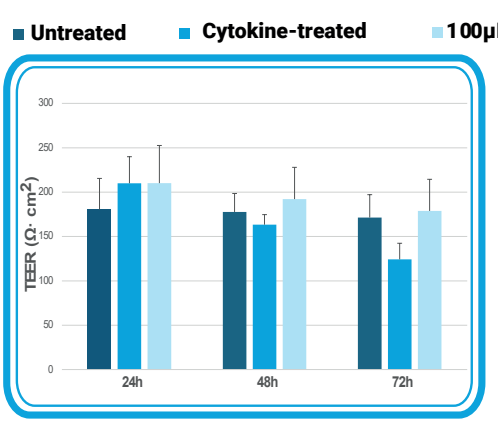

Figure 4. *TEER values up to 72-hr incubation of cytokine-induced CacoGoblet cells in the absence/presence of 100 µM Baicalein.*

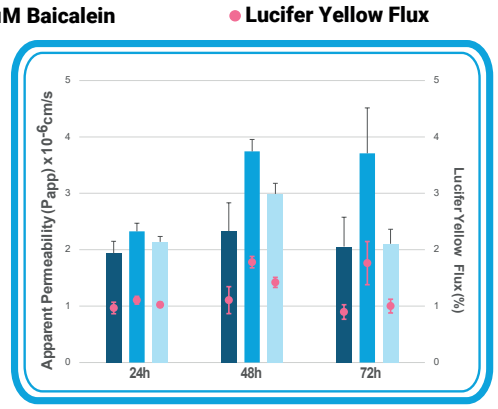

Figure 5. *LY P_{app}/Flux up to 72-hr incubation of cytokine-induced CacoGoblet cells in the absence/presence of 100 µM Baicalein.*

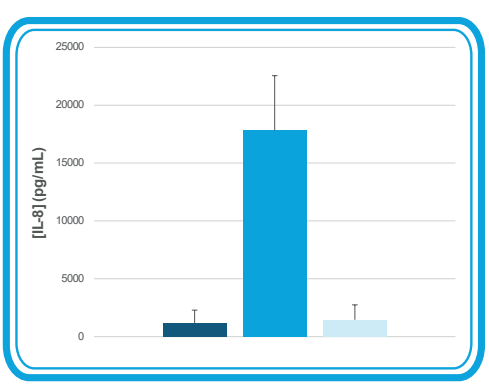

Figure 6. *IL-8 secretion after 72-hr incubation of cytokine-induced CacoGoblet cells in the absence/presence of 100 µM Baicalein.*

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