

Corning® High Content Imaging Cyclic Olefin Copolymer Microplates for High Throughput Data Capture and Analysis

Technical Brief

CORNING

Corning high optical-quality film bottom, black microplates are ideal for performing high content cell-based assays using imaging systems. The Cyclic Olefin Copolymer (COC) film bottom provides a flat and optically clear surface that reduces autofocus time, increases throughput, and is ideal for cell growth.

Benefits

- ▶ Film bottom thickness of 127 μm is well suited for imaging microscopy
- ▶ Well bottom flatness <50 μm to ensure planarity for imaging devices
- ▶ Low background fluorescence and minimal crosstalk to provide the highest possible optical quality for cell based assays
- ▶ Microplate geometry eliminates reagent loss due to “wicking”
- ▶ COC microplates provide an effective alternative to glass bottom microplates for high content analysis of cellular assays and fluorescence-based labeling
- ▶ The COC microplate film bottom is tissue culture-treated for enhanced cell attachment

Application

High content imaging microplates are a valuable tool for drug screening and studying the effects of drug candidates on cellular phenotype and function. Applications that utilize high content microplates include assays for apoptosis, cytotoxicity, cell migration, cell proliferation, neurite outgrowth, and many others. Here we show data derived from a neurite outgrowth assay utilizing Corning high content imaging COC microplates.

PC-12 cells were seeded on Poly-D-Lysine (PDL)-coated COC high content imaging microplates. Cells were exposed to various concentrations of rat nerve growth factor (NGF) to initiate neurite outgrowth. After 7 days, cells were stained with β III Tubulin and Hoechst (Figures 1 and 2). A dose-dependent increase in neurite outgrowth was observed in the presence of increasing concentrations of NGF (Figure 3).

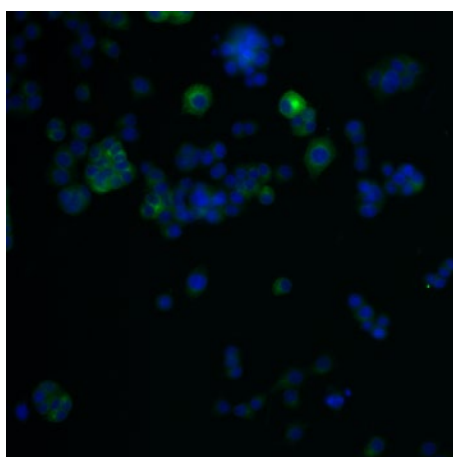


Figure 1. Control (0 ng/mL NGF)

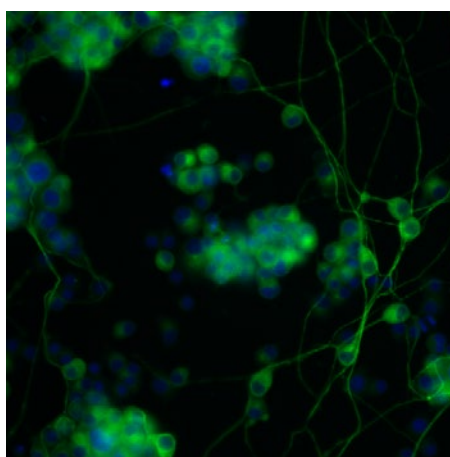


Figure 2. Control (400 ng/mL NGF)

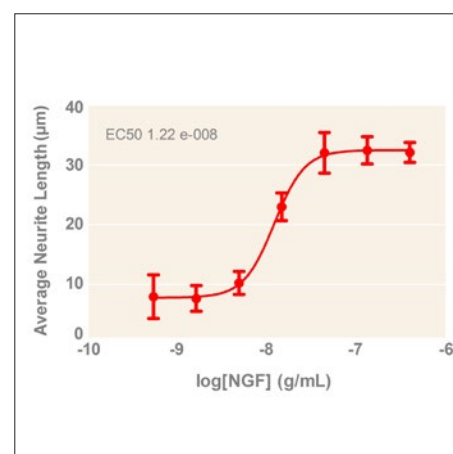


Figure 3. Neurite Outgrowth

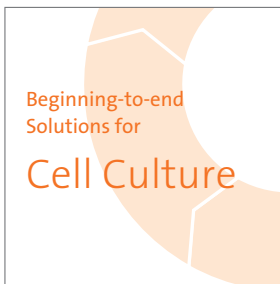
For more details on this experiment and other assays performed using Corning high content imaging COC microplates please refer to Corning document CLS-AN-232.

Ordering Information

Corning® 96 and 384 Well Microplates with Film Bottom for High Content Imaging

Cat. No.	Description	Sterile	Qty/Pk	Qty/Cs
4680	96 well half-area plates, black with clear COC film bottom, with lid, tissue culture-treated	Yes	4	16
4681	384 well, black with clear COC film bottom, with lid, tissue culture-treated	Yes	10	20

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It is this expertise, plus a 160-year history of Corning innovation and manufacturing excellence, that puts us in a unique position to offer a beginning-to-end portfolio of high-quality, reliable cell culture consumables.

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