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

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Technical Brief

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 (TC)-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 βIII 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).

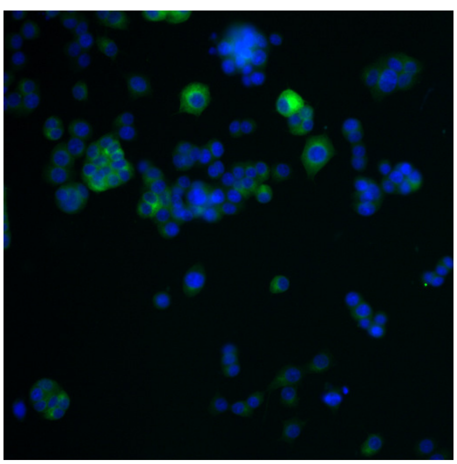

Figure 1. Control (0 ng/mL NGF).

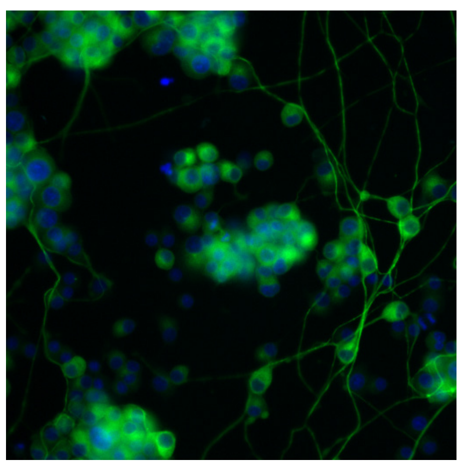

Figure 2. Control (400 ng/mL NGF).

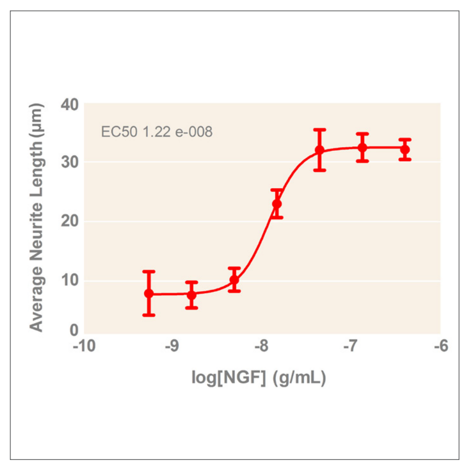

Figure 3. Neurite outgrowth.

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, black/clear COC film bottom, with lid, TC-treated	Yes	4	16
4681	384-well, black/clear COC film bottom, with lid, TC-treated	Yes	10	20

For more details on this experiment and other assays performed using Corning high content imaging COC microplates, refer to our application note: High Content Imaging Cyclic Olefin Copolymer (COC) Microplates Prove to be Effective Tools for High Throughput Data Capture and Analysis (CLS-AN-232).

How to Purchase: For specific availability in your region and purchasing options, terms and conditions of sale, customer/product support, and certificates, visit **www.corning.com/how-to-buy**.

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Corning's products are not specifically designed and tested for diagnostic testing. Many Corning products, though not specific for diagnostic testing, can be used in the workflow and preparation of the test at the customers discretion. Customers may use these products to support their claims. We cannot make any claims or statements that our products are approved for diagnostic testing either directly or indirectly. The customer is responsible for any testing, validation, and/or regulatory submissions that may be required to support the safety and efficacy of their intended application.

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