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 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).

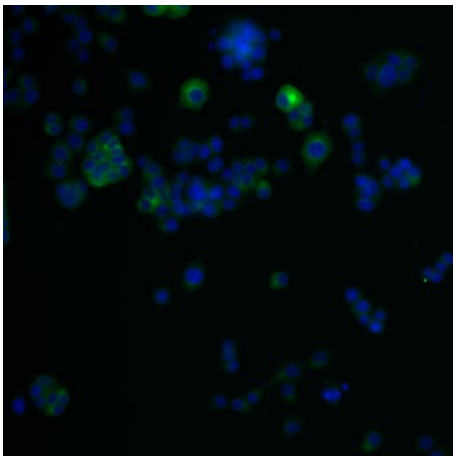

Figure 1. Control (0 ng/mL NGF)

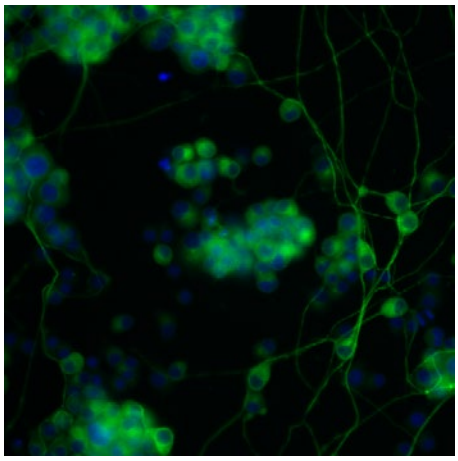

Figure 2. Control (400 ng/mL NGF)

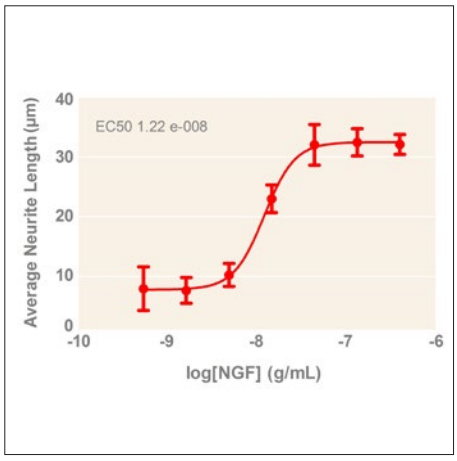

Figure 3. Neurite Outgrowth

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

Warranty/Disclaimer: Unless otherwise specified, all products are for research use only. Not intended for use in diagnostic or therapeutic procedures. Not for use in humans. Corning Life Sciences makes no claims regarding the performance of these products for clinical or diagnostic applications.

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At Corning, cells are in our culture. In our continuous efforts to improve efficiencies and develop new tools and technologies for life science researchers, we have scientists working in Corning R&D labs across the globe, doing what you do every day. From seeding starter cultures to expanding cells for assays, our technical experts understand your challenges and your increased need for more reliable cells and cellular material.

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.

For additional product or technical information, please call 800.492.1110 or visit **www.corning.com/lifesciences**. Customers outside the United States, call +1.978.442.2200 or contact your local Corning sales office listed below.

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