How to Accelerate your Cell Migration and Invasion Assays in Steps

Migration and invasion assays are critical tools for unlocking the intricacies of cancer, but they often require time-consuming, destructive, and manual processing. Corning[®] FluoroBlok[™] cell culture inserts allow researchers to accelerate their research by detecting migrated cells in a homogeneous, non-destructive format. FluoroBlok inserts contain a proprietary light-blocking membrane that prevents light transmission between 400 to 700 nm, so only those cells that have migrated or invaded through the membrane will be detected via fluorescent labeling and detection. Unlike traditional methods that only provide end-point data, FluoroBlok inserts make it possible to enrich your study with real-time kinetic data. Check out how FluoroBlok light blocking membranes compare to traditional methods, and see how your migration and invasion assays can be as fast and simple as 1, 2, 3.



It is necessary to count several fields within each well to take into account

cell invasion/migration patterns.

Step 1: Add your cells plus chemoattractant and incubate. For invasion assays, Corning offers inserts, pre-coated with Corning Matrigel[®] matrix to help kick start your assay.



Prefer to self coat? Corning permeable supports are available in uncoated versions that are compatible with a variety of ECMs.

Do you want to get on the fast track?

Step 2: If you've fluorescently pre-labeled your cells, simply place your FluoroBlok invasion system in a fluorescence reader at regular intervals to document invasion/ migration as it unfolds.



To omit the pre-labeling step, consider using transfected cells intrinsically labeled with GFP or other analogs.

Step 3: Complete monitoring of the migrated cells. If conducting endpoint analysis, post-label cells to capture results without additional processing.



No real-time kinetic data is available.

Step 3: Swab the inside of each insert until all non-migrated cells are removed, or dissociate cells and collect them prior to fluorescence analysis.

Step 4: Stain or fluorescently label your cells.

Step 2: Wait for

migration to occur.

Step 5: Manually count stained cells to document cell movement. If using fluorescence dissociation method, place in a fluorescence plate reader and read.

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When you use FluoroBlok for invasion and migration assays, no tedious manual sample processing is necessary, so assays may be automated for high throughput screening.

FluoroBlok inserts are perfect tools for cancer research and other applications, including:

- Inflammation with neutrophils, transepithelial and transendothelial migration, analysis of blood-brain barrier, dendritic cells, and macrophages
- Pathways for stem cell differentiation
- Screening for population-specific neuronal motogens
- Migration of normal, transformed, and transfected cells
- Chemoinvasion assays, drug discovery



Corning[®] FluoroBlok[™] light-blocking inserts

A clear winner for migration and invasion assays

- No need to dismantle, wash, and manually count



- Enables both endpoint and real-time kinetic analyses
- Reduces opportunities for error and variability
- Increases productivity and assay throughput

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