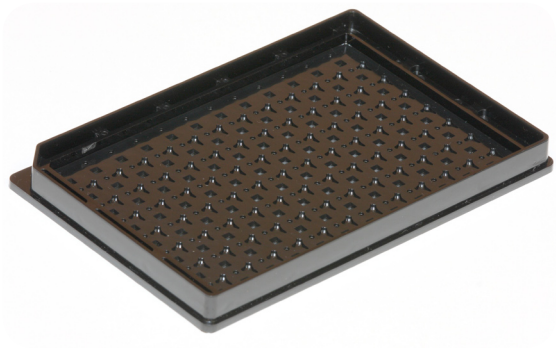
iuvo™ Chemotaxis Assay Plate

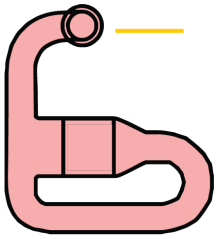
BellBrook Labs

Highly Miniaturized HCA Assay for Neutrophil Chemotaxis in a Stable Gradient.

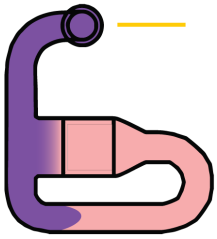
Chemotaxis, the movement of cells in the direction of a chemical gradient, is a fundamental process in inflammation. The iuvo Chemotaxis Assay Plate is a new approach for quantitative measurements of cell chemotaxis in a plate designed for use with automated liquid handling and HCA platforms. The plates are constructed in a single piece with no filters or membranes and are compliant with the SBS/ANSI standard for microplates. A chemical gradient is formed at one end of a microchannel and remains stable for several hours. Microscopic imaging of cell movement into the gradient region provides quantitative data on the number of cells migrating and distance traveled.

Fully Automated Assay Method in a 96 Point Array

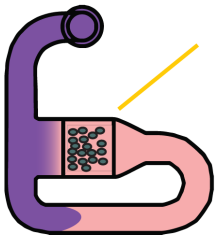




Fill device with 20 µL media through attractant addition port

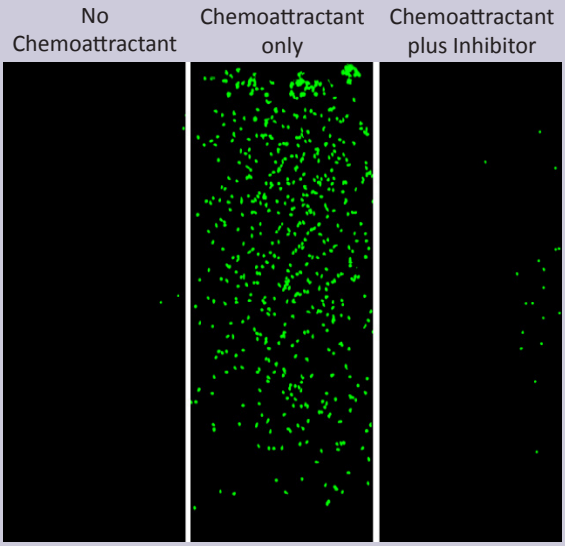


Add 3 µL chemoattractant to attractant addition port. Gradient will stabilize in 30-90 minutes



Add 3 µL (<10,000) cells to cell addition port

Image based detection of cell number and distance traveled.



10x images of individual gradient microchannels. Gradient (low to high) is oriented right to left.

· Assay requires less than 12,000 cells per data point
· Cells migrate in a stable gradient of chemoattractant
· Addition only assay; no inserts or masks required
· Fully compatible with lab automation workstations
· Compound treatment of cells is performed in the assay plate.

For more information, contact us at 866-313-7881, info@bellbrooklabs.com, or visit www.bellbrooklabs.com

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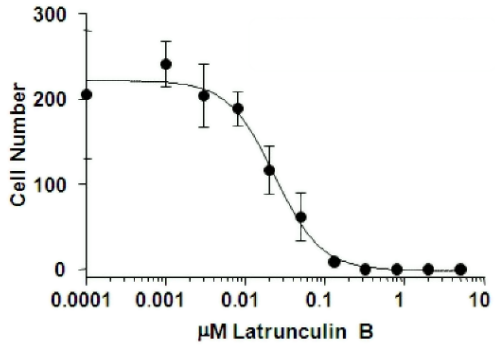
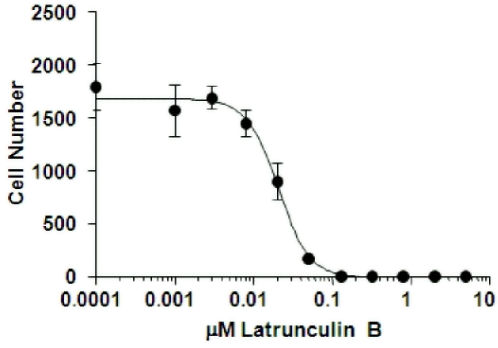
Quantitative Inhibitor Profiling

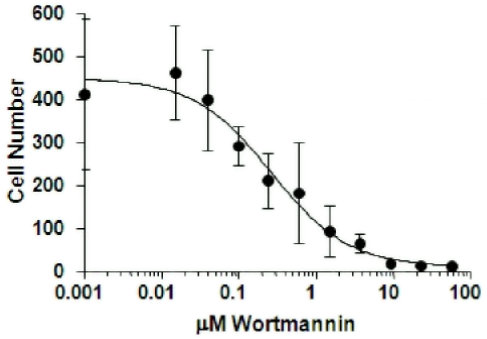
A. IL-8/Latrunculin B



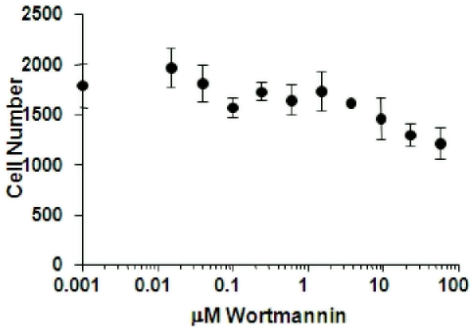
B. fMLP/Latrunculin B



C. IL-8/Wortmannin

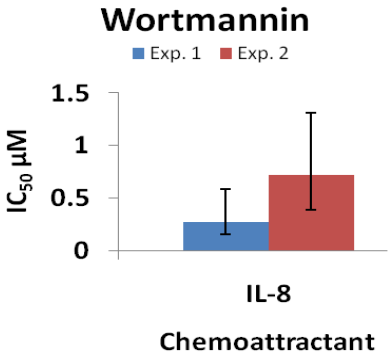


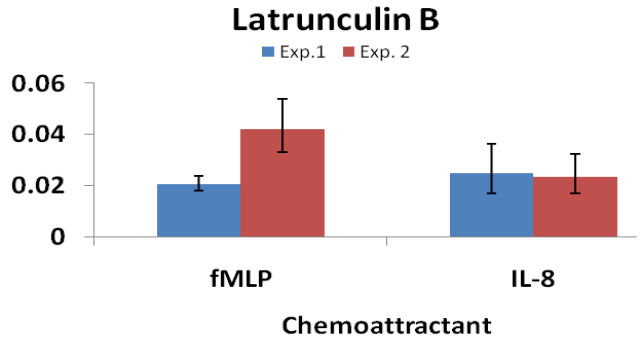
D. fMLP/Wortmannin



Dose response inhibition of fMLP and IL-8 induced PMN chemotaxis. Approximately 12,000 cells per channel were pre-treated with the indicated amount of inhibitor in the plate for 30 min. After adding the indicated chemoattractant (200 nM fMLP or 62 nM IL-8), the plate was incubated for 2.5h. The graph shows the mean and standard deviation for replicates of 4.

Day-to-Day Reproducibility





IC50 values acquired from multiple dose response experiments. PMN chemotaxis dose response inhibition curves were obtained as described above. Shown are IC50 values obtained fromtwo separate experiments and the 95% confidence intervals as error bars.

Cat#	Product	Size	Price
6006	iuvo Chemotaxis Assay Plate	1 Plate (96 microchannels)	$200

To order, please contact us by phone at 866-313-7881, or by email at info@bellbrooklabs.com

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