

Materials List for:

Analysis of Cancer Cell Invasion and Anti-metastatic Drug Screening Using Hydrogel Micro-chamber Array (HMCA)-based Plates

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Materials

Name	Company	Catalog Number	Comments
6 Micro-well Glass Bottom Plates with 14 mm micro-well #1.5 cover glass	Cellvis	P06-14-1.5-N	Commercial glass bottom plates which are used for HMCA embossing
UltraPure Low Melting Point Agarose	Invitrogen	16520100	A solution of 6% agarose is warmed up to 80 °C before use, a solution of 1% agarose is warmed to 37 °C
Trypsin EDTA solution B	Biological Industries	03-052-1A	Warmed to 37 °C before use
DMEM medium, high glucose	Biological Industries	01-055-1A	Warmed to 37 °C before use
Special Newborn Calf Serum (NBCS)	Biological Industries	04-122-1A	Heat Inactivated
DPBS (10x), no calcium, no magnesium	Biological Industries	02-023-5A	Kept on ice before use
NaOH, anhydrous	Sigma-Aldrich	S5881-500G	Used for the preparation of 1 M NaOH solution
Cultrex Type I collagen from rat tail, 5 mg/mL	Trevigen	3440-100-01	Kept on ice before use
Hyaluronic acid sodium salt	Sigma-Aldrich	H5542-10MG	Kept on ice before use
Fisetin	Sigma-Aldrich	F505-100MG	Added to the culture medium, invasion inhibitor
DETA/NO	Enzo Life Sciences	alx-430-014-m005	Added to the culture medium, nitric oxide donor
PI	Sigma-Aldrich	P4170	Used at very low concentration without the need for washing
Dymax 5000-EC UV flood lamp complete system with light shield & Dymax 400 Watt EC power supply	Dymax Corporation	PN 39823	Used for HMCA plate sterilization by UV
Inverted IX81 microscope	Olympus		Used for automatic image acquisition
Incubator for microscope	Life Imaging Services		Essential for time lapse experiments with image acquisition, pre adjusted to 37 °C, 5% CO ₂ and keeping a humidified atmosphere
Sub-micron motorized stage type SCAN-IM	Marzhauser Wetzlar GmbH		Used to predetermine image acquisition areas, for automatic image acquisition
14-bit, ORCA II C4742-98 cooled camera	Hamamatsu Photonics		Highly sensitive, used for imaging
Fluorescent filter cube for PI detection	Chroma Technology Corporation		Filter cube specifications: excitation filter 530-550 nm,

			dichroic mirror 565 nm long pass and emission filter 600-660 nm
The Olympus Cell^P operating software	Olympus		Software used to control microscope, motorized stage, camera and image acquisition
Matlab R2014B analysis software	Mathworks		Used to develop in house graphic user interface for image analysis
Excel software	Microsoft		Used for data management, calculation, plot creation and statistics