Datasheet for ABIN2344841

CytoSelect™ 24-well Cell Migration and Invasion Assay (8 µm), Fluorometric, Combo Kit

5 Publications

Go to Product page

Overview

Quantity:	2 x 12 tests
Reactivity:	Mammalian
Application:	Cellular Assay (CA)

Product Details

Brand:	CytoSelect™
Sample Type:	Serum, Cell Samples
Analytical Method:	Quantitative
Detection Method:	Fluorometric
Characteristics:	CytoSelect™ Cell Migration and Invasion Assay utilize polycarbonate membrane inserts (8 µm pore size) or basement membrane-coated inserts to assay the migratory or invasive properties of cells. The kit does not require you to prelabel the cells with Calcein AM or remove non-migratory or non-invasive cells (i.e. cotton swabbing). Any migratory or invasive cells are first dissociated from the membrane, then lysed and detected by the patented CyQuant® GR Dye (Invitrogen). TheCytoSelect™ Cell Migration and Invasive Assay Kit provides a robust system for the quantitative determination of cell migration. Each assay contains sufficient reagents for the evaluation of 12 samples. The 8 µm pore size is optimal for epithelial and fibroblast cell migration. However, in the case of leukocyte chemotaxis, a smaller pore size (3 µm) is recommended.
Components:	1. 24-well Migration Plate : One 24-well plate containing 12 cell culture inserts (8 µm pore size) 2. Invasion Chamber Plate : One 24-well plate containing 12 ECM-coated cell culture inserts. 3. Cell Detachment Solution : One 20 mL bottle

Product Details

	4. 4X Lysis Buffer : One 10 mL bottle 5. CyQuant® GR Dye : One 50 µL tube 6. Forceps : One each
Material not included:	1. Migratory or invasive cell lines 2. Cell culture medium 3. Serum free medium, such as DMEM containing 0.5 % BSA, 2 mM CaCl2 and 2 mM MgCl2 4. Cell culture incubator (37 °C, 5 % CO2 atmosphere) 5. Light microscope 6. 96-well plate suitable for a fluorescence plate reader 7. Fluorescence plate reader

Target Details

Background:	Cell migration is a highly integrated, multistep process that orchestrates embryonic morphogenesis, tissue repair and regeneration. It plays a pivotal role in the disease progression of cancer, mental retardation, atherosclerosis, and arthritis. The initial response of a cell to a migration-promoting agent is to polarize and extend protrusions in the direction of the attractant, these protrusions can consist of large, broad lamellipodia or spike-like filopodia. In either case, these protrusions are driven by actin polymerization and can be stabilized by extracellular matrix (ECM) adhesion or cell-cell interactions (via transmembrane receptors). The ability of malignant tumor cells to invade normal surrounding tissue contributes in large part to the significant morbidity and mortality of cancers. Invasiveness requires several distinct cellular functions including adhesion, motility, detachment, and extracellular matrix proteolysis. Metastatic cells produce many proteolytic enzymes (e.g. lysosomal hydrolysates, collagenases, plasminogen activators) while the expression of certain cell surface protease receptors is also increased.

Application Details

Application Notes:	Optimal working dilution should be determined by the investigator.
Comment:	• Fully quantify chemotaxis and cell invasion with no manual cell counting • Includes two plates with 8 µm membrane inserts: one uncoated for chemotaxis and one precoated on top of the membrane with ECM matrix (basement membrane) for cell invasion
Plate:	Pre-coated
Restrictions:	For Research Use only

Handling

Storage:	4 °C
Storage Comment:	Store all components at 4°C.

Publications

Product cited in:

Bhansali, Zhou, Shemshedini: "TM4SF3 and AR: A Nuclear Complex that Stabilizes Both Proteins." in: **Molecular endocrinology (Baltimore, Md.)**, Vol. 30, Issue 1, pp. 13-25, (2016) (PubMed).

Lombard, Lim, Nakagawa, Vidallo, Libertini, Platero, Mudryj: "Dicer ablation promotes a mesenchymal and invasive phenotype in bladder cancer cells." in: **Oncology reports**, Vol. 34, Issue 3, pp. 1526-32, (2015) (PubMed).

Saini, Majid, Shahryari, Tabatabai, Arora, Yamamura, Tanaka, Dahiya, Deng: "Regulation of SRC kinases by microRNA-3607 located in a frequently deleted locus in prostate cancer." in: **Molecular cancer therapeutics**, Vol. 13, Issue 7, pp. 1952-63, (2014) (PubMed).

Gobeil, Zhu, Doillon, Green: "A genome-wide shRNA screen identifies GAS1 as a novel melanoma metastasis suppressor gene." in: **Genes & development**, Vol. 22, Issue 21, pp. 2932-40, (2008) (PubMed).

Uddin, Horvat, Glaser, Danchuk, Mitchell, Sullivan, Morris, Puschett: "Marinobufagenin inhibits proliferation and migration of cytotrophoblast and CHO cells." in: **Placenta**, Vol. 29, Issue 3, pp. 266-73, (2008) (PubMed).