Datasheet for ABIN2344834

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

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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:	Colorimetric
Characteristics:	CytoSelect™ Cell Migration Assay utilizes polycarbonate membrane inserts (8 µm pore size) to assay the migratory properties of cells. 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 µ m) is recommended. CytoSelect™ Cell Invasion Assay utilizes basement membrane-coated inserts to assay the invasive properties of tumor cells. Each assay contains sufficient reagents for the evaluation of 12 samples.
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 Stain Solution : One 20 mL bottle 4. Extraction Solution : One 20 mL bottle 5. Cotton Swabs : 40 each 6. Forceps: One each
Material not included:	1. Migratory or invasive cell lines

Product Details

2. Cell culture medium
3. Serum free medium, such as DMEM containing 0.5 % BSA, 2 mM $CaCl_2$ and 2 mM $MgCl_2$
4. Cell culture incubator (37 °C, 5 % CO_2 atmosphere)
5. Light microscope
6. 96-well microtiter plate

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:

Gong, Shen, Yang, Qin, Huang, Zhang, Chen, Chen, Li, She, Yang, Ren, Hu: "Inhibition of FASN suppresses migration, invasion and growth in hepatoma carcinoma cells by deregulating the HIF-1α/IGFBP1 pathway." in: **International journal of oncology**, Vol. 50, Issue 3, pp. 883-892, (2017) (PubMed).

Coban, Kasikci, Karatas, Suakar, Kuskucu, Altunbek, Türe, Sahin, Bayrak: "Characterization of stem-like cells in a new astroblastoma cell line." in: **Experimental cell research**, Vol. 352, Issue 2, pp. 393-402, (2017) (PubMed).

Pak, Bashir, Kim, Hong, Maeng, Bahk, Kim: "Clonorchis sinensis excretory-secretory products promote the migration and invasion of cholangiocarcinoma cells by activating the integrin β4-FAK/Src signaling pathway." in: **Molecular and biochemical parasitology**, Vol. 214, pp. 1-9, (2017) (PubMed).

Fu, Chen, Cai, Wang, Liu, Lin, Wu, Liang, Han, Liu, Zhong: "Overexpression of BUB1B contributes to progression of prostate cancer and predicts poor outcome in patients with prostate cancer." in: **OncoTargets and therapy**, Vol. 9, pp. 2211-20, (2016) (PubMed).

Li, Nakka, Kelly, Lau, Krailo, Barkauskas, Hicks, Man: "p27 Is a Candidate Prognostic Biomarker and Metastatic Promoter in Osteosarcoma." in: **Cancer research**, Vol. 76, Issue 13, pp. 4002-11, (2016) (PubMed).

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