CytoSelect Cell Migration and Invasion Assay (8 um) Assay Kit

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

CATALOG #
AAA44614

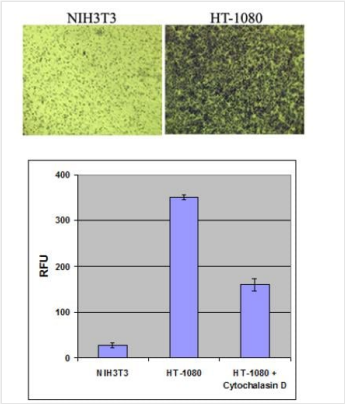
PRODUCT SYNONYMS

CytoSelect Cell Migration and Invasion Assay (8 um); CytoSelect 24-well Cell Migration and Invasion Assay (8 um); Fluorometric; Combo Kit; CytoSelect Cell Migration and Invasion Assay (8 um) assay kit

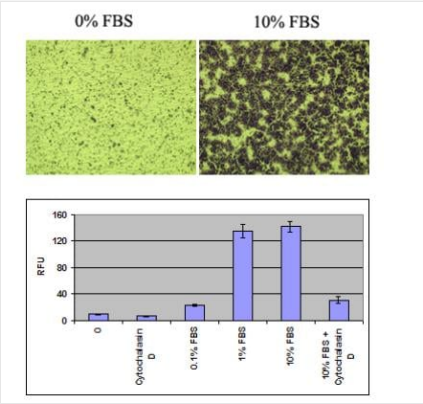
PRODUCT SPECIFICATIONS

Preparation and Storage	Store all components at 4 degree C until their expiration dates.

IMAGES



Application Data



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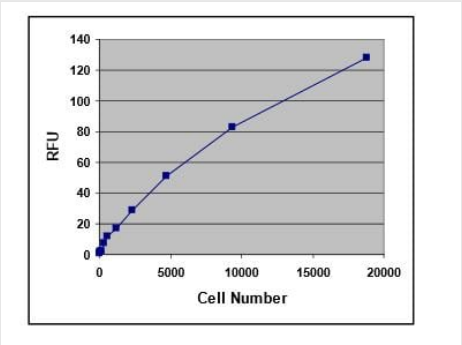

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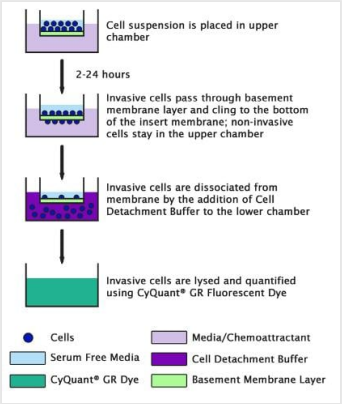

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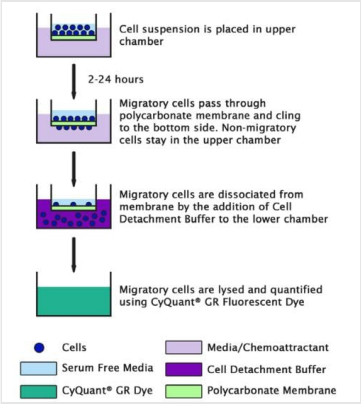

Application Data

ADDITIONAL INFORMATION

Related Product Information for CytoSelect Cell Migration and Invasion Assay (8 um) assay kit	Principle of the assay: The CytoSelect Cell Migration Assay Kit contains polycarbonate membrane inserts (8 mum pore size) in a 24-well plate. The membrane serves as a barrier to discriminate migratory cells from non-migratory cells. Migratory cells are able to extend protrusions towards chemoattractants (via actin cytoskeleton reorganization) and ultimately pass through the pores of the polycarbonate membrane. These migratory cells are then dissociated from the membrane and subsequently detected by the patented CyQuant GR Dye (Invitrogen). **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. CytoSelect Cell Migration and Invasion Assay utilize polycarbonate membrane inserts (8 mum 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 mum pore size is optimal for epithelial and fibroblast cell migration. However, in the case of leukocyte chemotaxis, a smaller pore size (3 mum) is recommended.
Product Categories/Family for CytoSelect Cell Migration and Invasion Assay (8 um) assay kit	Cell Based Assays; Cell Migration; Invasion and Wound Healing; Boyden Chamber Assays; Chemotaxis/Cell Invasion Combo Kits

References	1. Ridley AJ, Schwartz MA, Burridge K, Firtel RA, Ginsberg MH, Borisy G, Parsons JT, Horwitz AR. (2003) Science 302, 1704-9. 2. Horwitz R, Webb D. (2003) Curr Biol. 13, R756-9. 3. Lauffenburger DA, Horwitz AF. (1996) Cell 84, 359-369. 4. Erkell, L. J., Schirrmacher, V. (1988) Cancer Res 48, 6933-6937.5. Montgomery, A. M. P., De Clerck, Y. A., Langley, K. E., Reisfeld, R. A., Mueller, B. M. (1993) Cancer Res 53,693-700. 6. Monsky, W. L., Lin, C. Y., Aoyama, A., Kelly, T., Akiyama, S. K., Mueller, S. C., Chen, W. T. (1994) Cancer Res 54,5702-5710. 1. Saini, S. et al. (2014). Regulation of SRC kinases by microRNA-3607 located in a frequently deleted locus in prostate cancer. Mol Cancer Ther. 13:1952-1963. 2. Kawamura, M. et al. (2014). The prognostic significance of eukaryotic elongation factor 1 alpha-2 in non-small cell lung cancer. Anticancer Res. 34:651-658. 3. Uddin, M. et al. (2008). Marinobufagenin inhibits proliferation and migration of cytotrophoblast and CHO cells. Placenta 29(3):266-273. 4. Gobeil, S. et al. (2008). A genome-wide shRNA screen identifies GAS1 as a novel melanoma metastasis suppressor gene. Genes Dev. 22(21):2932-2940.

For Research Use Only. Not for use in diagnostic or therapeutic procedures. Small volumes of product may become entrapped in the seal of the vial during shipment and storage; if necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the cap.

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Online datasheet: https://www.aaabiotech.com/assay-kits/cytoselect-cell-migration-and-invasion-assay-8-um/44614