

COLUMN-BASED DEVICE AND METHOD FOR RETRIEVAL OF RARE CELLS BASED ON SIZE, AND USES THEREOF

ABSTRACT

5 A column-based device and method for retrieving cells of interest were enclosed. The said
device comprises a column comprising (i) an inner wall defining an inner chamber with inlet and
outlet openings, (ii) a perforated plug disposed adjacent to the outlet opening, (iii) a sleeve insert with
a channel and disposed within the chamber and adjacent to the perforated plug, and (iv) a filtering
means housed within sleeve insert sandwiched between two sealing means. In particular, Tumor-
10 derived endothelial cell clusters (TECCs) as characterized multiple nuclei, expression of endothelial
markers (PECAM1, VWF and CDH5), and non-expression of leukocyte, megakaryocyte and platelets
markers, may be retrieved using the disclosed device. Also encompassed are methods, reagents and
kits for the diagnosis and prognosis of cancers by detecting for the presence of TECCs isolated from
blood samples using the claimed device.

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(Fig. 1)