

CCK4 Antibody-coupled magnetic MicroBeads

Cat. No. CCK4-402M **Lot. No.** (See product label)

SPECIFICATION

Product Overview

Species Human

Capacity for 2×10^9 total cells

Background

The monoclonal anti-PTK7 antibody 188B recognizes human protein tyrosin kinase-7 (PTK7). PTK7, which is also known as colon carcinoma kinase-4 (CCK-4), is a receptor protein tyrosin kinase (RPTK)-like molecule which contains a catalytically inactive tyrosin kinase domain. PTK7 mRNA is detected in normal human melanocytes, colon carcinoma cells, as well as lung, liver, pancreas, kidney, and placenta tissue. Recently, using the specific monoclonal antibody 188B, PTK7 was shown to be expressed in blood and bone marrow, on CD303 (BDCA-2)+ plasmacytoid dendritic cells, CD141 (BDCA-3)high type-2 myeloid dendritic cells, and CD34+ hematopoietic progenitor cells (HPCs). PTK7 was detected on early (CD34+ CD133+) and late (CD34+ CD133-) HPCs. In tonsils, PTK7 was also found on some T cells.

Application

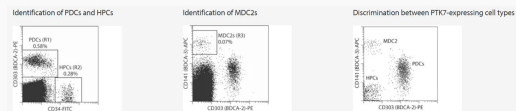
Positive selection or depletion of PTK7 (CCK-4)+ cells from blood, body fluids (e.g. bronchial lavage), or single-cell suspensions of bone marrow or tissue (e.g. lymphoid and tumor tissue). The kit can be used for simultaneous isolation of PDCs, MDC2s, and HPCs from PBMCs or BM-MNCs, or in combination with the CD1c (BDCA-1)+ Dendritic Cell Isolation Kit for simultaneous isolation of all blood dendritic cells (PDCs, MDC2s, and CD1c (BDCA-1)+ type-1 myeloid dendritic cells) and HPCs. Furthermore, the Anti-PTK7 (CCK-4) MicroBead Kit can be used for the isolation of

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PDCs if the CD304 (BDCA-4/Neuropilin-1) MicroBead Kit is not suitable, e.g., for the isolation of PDCs from tonsils. It can also be used for isolation of HPCs if the CD34 MicroBead Kit is not applicable.



Analysis

Isolation of PTK7 (CCK-4)+ cells from PBMCs using the Anti-PTK7 (CCK-4) MicroBead Kit and a MiniMACS Separator with MS Columns. Aliquots are fluorescently stained (A) before and (B) after magnetic separation with CD34-FITC, CD303 (BDCA-2)-PE and CD141 (BDCA-3)-APC for identification of hematopoietic stem cells (HPCs), plasmacytoid dendritic cells (PDCs), and type-2 myeloid dendritic cells (MDC2), respectively. Before and after separation, cells were gated on R1 (PDCs), R2 (HPCs), and R3 (MDC2s). Due to specific expression of CD303 (BDCA-2), CD141 (BDCA-3), and CD34 there is no overlap between the different PTK7-expressing cell types, and PDCs, HPCs, and MDC2s are clearly discriminated.

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