

BSG protein-coupled magnetic MicroBeads

Cat. No. BSG-294M Lot. No. (See product label)

SPECIFICATION

Product Overview

Species Human

Capacity for 1×10^9 total cells

Background

CD146 is a transmembrane glycoprotein belonging to the immunoglobulin superfamily and contains five extracellular immunoglobulin (Ig)-like domains.

CD146 possesses a limited tissue expression distribution, including endothelial cells, smooth muscle cells, pericytes, follicular dendritic cells, melanoma cells, and a subpopulation of activated T lymphocytes. CD146+ cells isolated from umbilical cord, lipoaspirate, dental pulp, or endometrial tissue, are described to contain cells with clonogenic fibroblastic colony (CFU-F) activity and multilineage differentiation potential, which are often called mesenchymal or marrow stromal cells (MSCs).

CD146 functions as a Ca^{2+} -independent cell adhesion molecule, which is involved in heterophilic cell-cell interactions, and may be involved in the extravasion and/or homing of activated T cells. CD146 expression in melanoma is also directly associated with tumor growth and metastasis.

Application

The CD146 MicroBead Kit can be used for:

isolation of human mesenchymal stromal cells (MSCs) from lipoaspirate and other tissue sources,

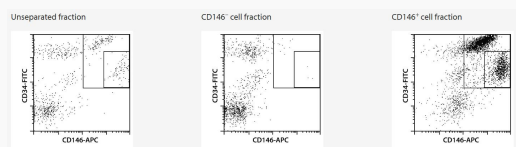
isolation of endothelial cells and pericytes from human endothelial tissue,

isolation of human umbilical vein endothelial cells (HUVECs) and human umbilical cord perivascular cells (HUCPVCs) from umbilical cord vein.

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Analysis

CD146+ cells were separated from lipoaspirate using the CD146 MicroBead Kit, an LS Column, and a MidiMACS Separator. Cells were stained with CD146-APC and CD34-FITC.

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