



nPAC™ CSC/CEC IF Kit

OL5070012

Analysis of circulating stromal cells (CSCs) and circulating endothelial cells (CECs)

OncoLab's nPAC™ CSC/CEC IF Kit enables the robust detection and reliable enumeration of CSCs and CECs. A liquid biopsy is a non-invasive method with the potential to dramatically improve the patient's survival by providing valuable information for clinical decision-making. The enumeration of circulating rare cells, shed by the tumor into the blood stream, is a useful tool to monitor treatment response and/or disease progression.

The nCyte Dx® platform is a transformational imaging and rare cell detection technology with the ability to detect circulating tumor cells and other

rare cells at very low concentrations with high specificity. Once a sample is labeled using the nPAC™ CSC/CEC IF Kit and placed on a slide, the nCyte Dx® fluorescent slide scanner together with the nCyte Dx nAble® software rapidly scans and identifies the fluorescent CSCs and CECs and records their positions within one micrometer on the slide. The scanner then returns to each suspicious cell location and records a high-resolution, multi-channel picture. This nCyte Dx® platform along with liquid biopsy enables the detection and enumeration of circulating rare cells, like CSCs and CECs.

MATERIALS PROVIDED

Materials Provided	Quantity for 12 tests	color code
nPAC™ CSC/CEC Antibody Mix (contains mouse anti-Vim-550 / anti-CD105-650 / anti-CD45-490 NHS-Ester conjugated antibodies)	12 x 50 µl	Red
DAPI	24 µl	White
nPAC™ Blocking Buffer	12 x 100 µl	Yellow
nPAC™ Washing Buffer (2x)	12 x 2000 µl	Green
nPAC™ Fixative	1200 µl	Purple
nPAC™ Permeabilization Buffer	12 ml	-
Filter Tubes	1 pack	-
Low-retention Tubes	1 pack	-

Stromal and endothelial cells from the primary tumor can be shed into the bloodstream. Analysis of these cells may be useful to elucidate biological mechanisms of cancer. Damage to the vasculature is observed in other diseases that are caused by inflammation. As a result, endothelial cells may be released into the circulation.

The nPAC™ CSC/CEC IF Kit enables fluorescent labeling of vimentin (Vim)-positive stromal cells (CSCs), CD105+ endothelial cells (CECs), and CD45+ white blood cells (WBCs). It is used in combination with the “Blood Collection Kit” and the nCyte Dx® platform (Axon Dx®) for enumeration and identification of Vim+ cells and CD105+ cells.

The analysis and enumeration of CSCs and CECs is performed using the nCyte Dx® platform. The kit contains nPAC™ immunofluorescent reagents that were designed to specifically stain Vim+ cells,

CD105+ cells and leukocytes. Blood samples are collected using CellSave Preservative Tubes (Menarini Silicon Biosystems, Inc.) and processed using BD Vacutainer® CPT™ tubes (BD Biosciences) for separation of mononuclear cells (PBMCs) from whole blood. Fluorescent reagents that contain antibodies directed against Vim, CD105, CD45 and other propriety markers that are specific for leukocytes are added to the PBMC fraction. DAPI is used to stain cell nuclei. The nCyte Dx system® automatically scans the entire sample, acquires images, and displays any event to the user where Vim+ and DAPI+ signals are co-located. Images are presented to the user in a gallery format for final classification of the cells of interest. An event is classified as a CSC/CEC when its morphological features are consistent with that of a cell and it exhibits the correct phenotypes, i.e. Vim+, DAPI+, CD105-/+ and CD45-.

ADDITIONAL MATERIALS REQUIRED

Required Consumables

- Blood Collection Kit (OncoLab, OL6010012)
- CRC IF Materials Kit (OncoLab, OL5090012)
- PBS (without Ca⁺⁺ and Mg⁺⁺)
- High purity water

Required Equipment

- Cell Counting Device
- Tube Rotator (360°)
- Vacuum pump
- Vacuum sampling manifold (e.g. OL90300)
- Fluorescence Microscope (e.g. nCyte Dx® OL90100)
- Standard laboratory equipment



The nPAC™ CSC/CEC IF Kit is offered in cooperation with

AXON Dx

This product is not for diagnostic use.

Order Information:

nPAC™ CSC/CEC IF Kit (12 tests)	OL5070012
Blood Collection Kit	OL6010012
CRC IF Materials Kit	OL5090012
Vacuum Sampling Manifold	OL90300
nCyte Dx® Advanced Optical Scanner (incl. nCyte Dx nAble® Software)	OL90100



Manufacturer:

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