Maxpar® Human Monocyte/Macrophage Phenotyping Panel Kit

Catalog#: 201317
Package Size: 25 tests

Storage:
- Antibodies, Buffers, and Water: 4°C. Do not freeze.
- Intercalator-Ir: -20°C.

Contents:
- Maxpar® Cell Staining Buffer (500 mL)
- Maxpar® Fix and Perm Buffer (25 mL)
- Maxpar® Water (500 mL)
- Cell-ID™ Intercalator-Ir (125 µM; 25 µL)
- Maxpar® Antibodies (see table for panel)**

** The antibodies are provided in individual tubes, not a premixed cocktail.

Target	Clone	Metal	Target	Clone	Metal
CD19	HIB19	142Nd	CD14	M5E2	160Gd
CD11b	ICRF44	144Nd	CD16	3G8	165Ho
CD7	CD7-6B7	147Sm	CD38	HIT2	167Er
CD66	CD66a-B1.1	149Sm	CD206	15-2	168Er
CD36	5-271	152Sm	CD33	WM53	169Tm
CD163	GHI/61	154Sm	CD3	UCHT1	170Er
CD45	HI30	156Gd	HLA-DR	L243	174Yb
CD11c	Bu15	159Tb			

Technical Information

Description: The Maxpar® Human Monocyte/Macrophage Phenotyping Panel Kit identifies and phenotypes monocytes and macrophages. Monocytes circulate in the blood, bone marrow, and spleen and constitute approximately 2-12% of total human leukocytes. Monocytes have been considered as the systemic reservoir of myeloid precursors for renewal of tissue macrophages and dendritic cells, although there are DC and macrophage subpopulations that originate independently of monocytes. Recruited monocytes are innate effectors of the immune response to microbes, and they kill pathogens via phagocytosis, production of reactive oxygen species (ROS), nitric oxide (NO), myeloperoxidases and inflammatory cytokines. Monocytes can be categorized based on the expression of CD14 and CD16 as "classical" (CD14+CD16-), intermediate (CD14+CD16+) and non-classical (CD14loCD16+).

Recommended Usage: For staining with the Human Monocyte/Macrophage Phenotyping Panel Kit, cells should be prepared using standard techniques and stained according to the Maxpar® Cell Surface Staining Protocol. Data collection is performed on a CyTOF® mass cytometer.

References:

From Monocytes to M1/M2 Macrophages: Phenotypical vs. Functional Differentiation. Italiani P, Boraschi D. Front Immunol. 2014 Oct 17;5:514. Review.

Protective and pathogenic functions of macrophage subsets. Murray PJ, Wynn TA. Nat Rev Immunol. 2011 Oct 14;11(11):723-37. Review.

viSNE enables visualization of high dimensional single-cell data and reveals phenotypic heterogeneity of leukemia. Amir el-AD, Davis KL, Tadmor MD, Simonds EF, Levine JH, Bendall SC, Shenfeld DK, Krishnaswamy S, Nolan GP, Pe'er D. Nat Biotechnol. 2013 Jun;31(6):545-52.

For technical support visit fluidigm.com/support

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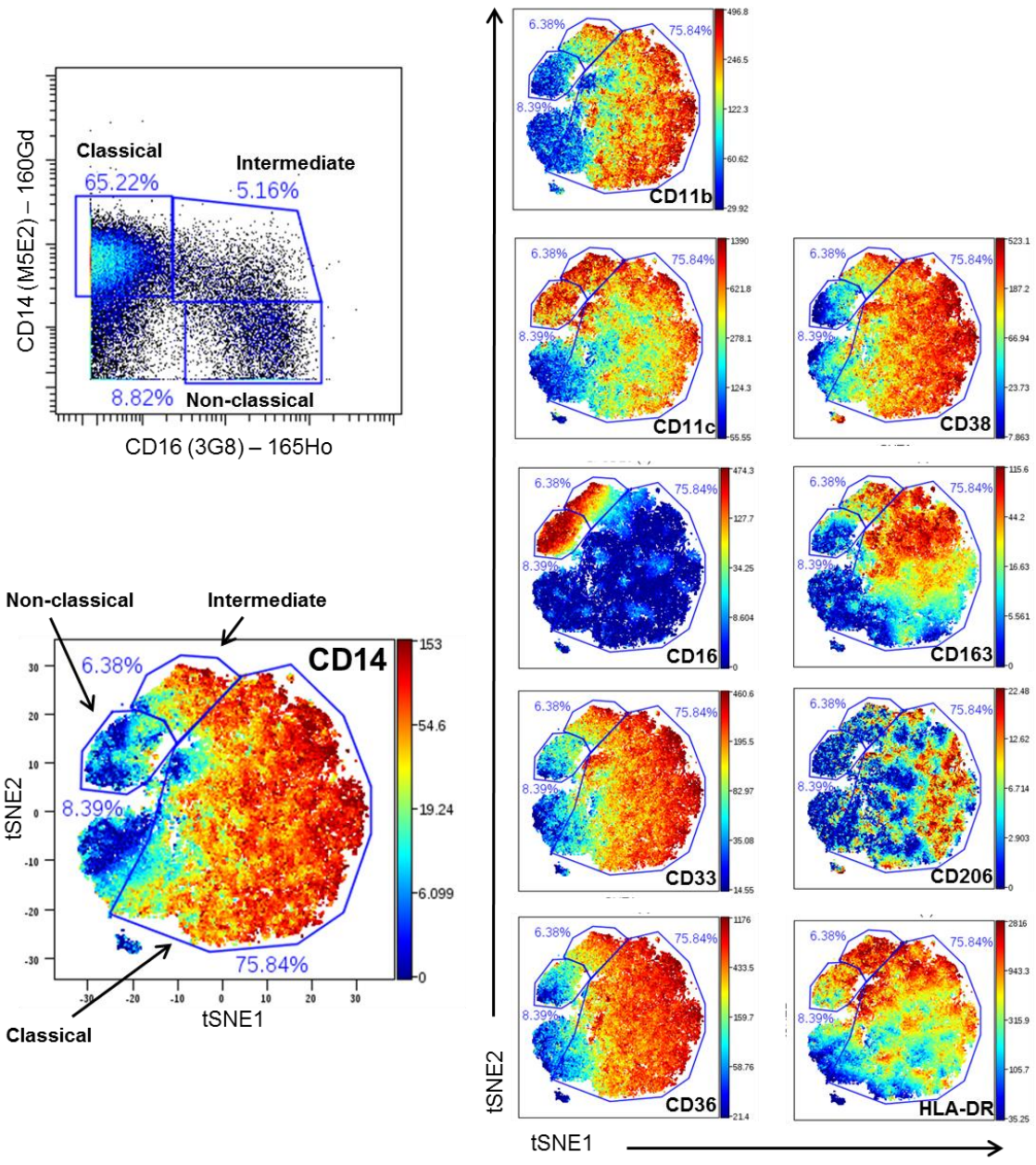

PBMCs were stained with the Maxpar Human Monocyte/Macrophage Phenotyping Panel Kit. Non-myeloid cells were removed by manual gating and viSNE analysis was performed on the remaining cells. viSNE projects the multi-dimensional distance between events resolved by the markers in the panel kit into two dimensions (tSNE1 and tSNE2); thus, tSNE1 and tSNE2 measure cell relatedness. The manually-gated classical, intermediate and non-classical monocytes (top left density plot) were used to define the boundaries for these populations in the viSNE map (bottom left, heat-mapped to CD14 expression). Each viSNE plot is heat mapped to the expression of the indicated marker.