

## Cytek<sup>®</sup> cFluor<sup>®</sup> Human Pan Leukocyte Kit, LNW

Cytek<sup>®</sup> cFluor<sup>®</sup> Human Pan Leukocyte Kit, LNW helps researchers to identify and enumerate leukocyte subsets in drug discovery and development, and their other research needs. This has been designed to fully enumerate the complete set of major leukocyte subsets and to mirror and expand on those identified in a traditional complete white blood cell differential. The kit has been optimized to be run on whole blood as a lyse no wash (LNW) assay which, in tandem with a complete blood count (CBC), allows accurate dual platform absolute population counts. Furthermore, the kit has been designed and validated to allow the sequential identification of populations that provides for easy and highly reproducible gating of results. This kit can also serve as a backbone panel which can be expanded upon to further identify any populations of interest, as well as the functional or activation/exhaustion status of a particular population.

PRODUCT DETAILS																																																	
<b>Catalog number:</b>	R7-40007 (50 Tests)																																																
<b>Category:</b>	Immunophenotyping																																																
<b>Format:</b>	cFluor <sup>®</sup> conjugated antibodies in individual vials																																																
	<table border="1"> <thead> <tr> <th>Target</th> <th>Clone</th> <th>Fluorochrome</th> </tr> </thead> <tbody> <tr> <td>CD8</td> <td>SK1</td> <td>cFluor<sup>®</sup> V450</td> </tr> <tr> <td>HLA-DR</td> <td>L243</td> <td>cFluor<sup>®</sup> V505</td> </tr> <tr> <td>CD45</td> <td>HI30</td> <td>cFluor<sup>®</sup> V547</td> </tr> <tr> <td>CD4</td> <td>SK3</td> <td>cFluor<sup>®</sup> V610</td> </tr> <tr> <td>CD16</td> <td>3G8</td> <td>cFluor<sup>®</sup> B515</td> </tr> <tr> <td>CD34</td> <td>4H11</td> <td>cFluor<sup>®</sup> BYG575</td> </tr> <tr> <td>CD123</td> <td>6H6</td> <td>cFluor<sup>®</sup> BYG610</td> </tr> <tr> <td>CD193 (CCR3)</td> <td>5E8</td> <td>cFluor<sup>®</sup> BYG667</td> </tr> <tr> <td>CD56</td> <td>LT56</td> <td>cFluor<sup>®</sup> BYG710</td> </tr> <tr> <td>CD19</td> <td>HIB19</td> <td>cFluor<sup>®</sup> BYG750</td> </tr> <tr> <td>CD14</td> <td>MEM-15</td> <td>cFluor<sup>®</sup> BYG781</td> </tr> <tr> <td>CD7</td> <td>CD7-6B7</td> <td>cFluor<sup>®</sup> R659</td> </tr> <tr> <td>CD20</td> <td>2H7</td> <td>cFluor<sup>®</sup> R685</td> </tr> <tr> <td>CD66b</td> <td>G10F5</td> <td>cFluor<sup>®</sup> R720</td> </tr> <tr> <td>CD3</td> <td>SK7</td> <td>cFluor<sup>®</sup> R780</td> </tr> </tbody> </table>	Target	Clone	Fluorochrome	CD8	SK1	cFluor <sup>®</sup> V450	HLA-DR	L243	cFluor <sup>®</sup> V505	CD45	HI30	cFluor <sup>®</sup> V547	CD4	SK3	cFluor <sup>®</sup> V610	CD16	3G8	cFluor <sup>®</sup> B515	CD34	4H11	cFluor <sup>®</sup> BYG575	CD123	6H6	cFluor <sup>®</sup> BYG610	CD193 (CCR3)	5E8	cFluor <sup>®</sup> BYG667	CD56	LT56	cFluor <sup>®</sup> BYG710	CD19	HIB19	cFluor <sup>®</sup> BYG750	CD14	MEM-15	cFluor <sup>®</sup> BYG781	CD7	CD7-6B7	cFluor <sup>®</sup> R659	CD20	2H7	cFluor <sup>®</sup> R685	CD66b	G10F5	cFluor <sup>®</sup> R720	CD3	SK7	cFluor <sup>®</sup> R780
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<b>Test Dilution:</b>	2 µl per test																																																
<b>Application:</b>	Flow cytometry																																																
<b>Formulation:</b>	Phosphate-buffered saline, pH 7.2, containing 0.09% sodium azide and 0.2% BSA (BSA Country of Origin USA)																																																
<b>Storage:</b>	2-8°C and protected from light. <b>Do not freeze</b>																																																

## PRODUCT DESCRIPTION

The Cytex<sup>®</sup> cFluor<sup>®</sup> Human Pan Leukocyte Kit, LNW allows for the identification of more than 20 leukocyte subpopulations, including neutrophils, eosinophils, basophils, lymphocytes, hematopoietic stem cells, monocyte subsets, T cell subsets, B cells, and NK cell subsets in whole blood.

**CD3** is expressed on all mature T cells, NK T cells, and some thymocytes. CD3, a part of the CD3/T cell receptor complex, plays a role in antigen recognition, signal transduction, and T cell activation.

**CD4** is expressed on most thymocytes, a major subset of T cells, and on monocytes/macrophages. Functionally, CD4 is associated with thymic differentiation, in conjunction with MHC class II molecules in antigen recognition and with signal transduction.

**CD7**, also known as GP40, is found on T cells, NK cells, thymocytes, and pre-B cells. CD7 is called T cell leukemia antigen for its expression on acute lymphocytic leukemia and some acute myeloid leukemia.

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**CD8** is found on thymocytes, on a subset of T cells and on NK cells. This molecule acts as a co-receptor in MHC class I molecules in antigen recognition and plays a role in T cell activation and thymic differentiation.

**CD14** is highly expressed on monocytes and macrophages and is known as a high affinity LPS receptor. It is also expressed on granulocytes, but at a lower level. In addition, CD14 is found on interfollicular dendritic cells, reticular dendritic cells, and Langerhans cells.

**CD16** is expressed on NK cells, monocytes and macrophages in the form of CD16a. Another form of CD16, CD16b is expressed on neutrophils. CD16 engagement of IgG leads to NK cell activation, antibody-dependent cell-mediated cytotoxicity (ADCC) and phagocytosis

**CD19** is expressed in the B cell lineage, from pro-B to blastoid B cells. However, it is absent on plasma cells. It is also expressed on follicular dendritic cells. CD19 is involved in B cell development, activation, and differentiation.

**CD20** is a membrane protein specific to mature B cells and is involved in the differentiation of B cells into plasma cells. The expression of CD20 is also found on a variety of malignant B cells.

**CD34**, also known as mucosialin, is a transmembrane protein that is commonly expressed on hematopoietic stem cells. The CD34 is also expressed on some populations of mesenchymal stem cells and vascular endothelium. The stem cell antigen CD34 is functioning as a regulator of hemopoietic cell adhesion.

**CD45** is expressed on all hematopoietic cells, except erythrocytes and platelets. CD45 is a signaling molecule that is involved in cellular proliferation, differentiation and in regulation of immune cell functions.

**CD56**, within the hematopoietic system is expressed on NK cells and NKT cells, a subset of T cells. In the nervous system, CD56 is expressed by neurons and plays a role in the homotypic adhesion of neural cells.

**CD66b**, also known as CD67, CGM6, and NCA-95, is exclusively expressed on human neutrophils and eosinophils. It is also recognized as granulocyte "activation marker".

**CD123**, also known as the alpha chain of the IL-3 receptor, is expressed predominantly on basophils, dendritic cells, hematopoietic progenitor cells, macrophages, eosinophils, monocytes, megakaryocytes, and some B cells.

**HLA-DR** is present on the surface of antigen-presenting cells, including B cells, dendritic cells, macrophages, monocytes and activated T cells. MHC class II regulates the immune system by playing a critical role in binding and presenting antigen-derived peptides to peptide-MHC class II-specific CD4 T cells.

**CD193 (CCR3)** is expressed on eosinophils, basophils, mast cells, and T cells. CCR3 is a major receptor for eotaxin, RANTES, and MCP-4. These chemo-attractants are involved in allergic inflammation and infiltration of CCR3 expressing cells into inflamed tissues.

#### REFERENCES

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Walseng E, et al. J Biol Chem. **283**,14717 (2008)

#### RECOMMENDED USAGE

Whole blood collected in K<sub>2</sub>EDTA, Heparin, ACD and Cyto-Chex<sup>®</sup> BCT blood tubes have been tested to validate the performance of this kit. For staining procedures, product data, and gating strategy, please refer to the Reagents and Protocols sections of our website at [www.cytokbio.com](http://www.cytokbio.com).

Please briefly centrifuge the reagent vial before use.

Use appropriate personal protective equipment per the product safety data sheet when using this product.



**For Research Use Only. Not intended for use in diagnostic procedures.**

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cFluor® BYG610, cFluor® BYG667, cFluor® BYG710, cFluor® BYG750, and cFluor® BYG781 are a tandem dyes made with R-PE. cFluor® R780 is a tandem dye made with APC. Caution – Tandem dyes may show changes in their emission spectra with prolonged exposure to light or fixatives.

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