

Cytek® cFluor® TBMNK Kit, 8 Color

PRODUCT DETAILS																																							
Catalog number:	R7-40001 (25 Tests)																																						
Category:	Immunophenotyping																																						
Format:	cFluor conjugated antibodies in individual tubes																																						
	<table> <tr> <th>Target</th><th>Clone</th><th>Fluorochrome</th><th>Item number</th></tr> <tr> <td>CD3</td><td>SK7</td><td>cFluor® V420</td><td>R7-20054</td></tr> <tr> <td>CD4</td><td>SK3</td><td>cFluor® R780¹</td><td>R7-20084</td></tr> <tr> <td>CD8</td><td>SK1</td><td>cFluor® B515²</td><td>R7-20036</td></tr> <tr> <td>CD14</td><td>M5E2</td><td>cFluor® V450</td><td>R7-20004</td></tr> <tr> <td>CD16</td><td>3G8</td><td>cFluor® R668²</td><td>R7-20070</td></tr> <tr> <td>CD19</td><td>H1B19</td><td>cFluor® BYG710¹</td><td>R7-20010</td></tr> <tr> <td>CD45</td><td>HI30</td><td>cFluor® V547²</td><td>R7-20012</td></tr> <tr> <td>CD56</td><td>5.1H11</td><td>cFluor® R720²</td><td>R7-20090</td></tr> </table>	Target	Clone	Fluorochrome	Item number	CD3	SK7	cFluor® V420	R7-20054	CD4	SK3	cFluor® R780 ¹	R7-20084	CD8	SK1	cFluor® B515 ²	R7-20036	CD14	M5E2	cFluor® V450	R7-20004	CD16	3G8	cFluor® R668 ²	R7-20070	CD19	H1B19	cFluor® BYG710 ¹	R7-20010	CD45	HI30	cFluor® V547 ²	R7-20012	CD56	5.1H11	cFluor® R720 ²	R7-20090		
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Test Dilution:	5µl per test																																						
Application:	Flow Cytometry																																						
Formulation:	Phosphate-buffered saline, pH 7.2, containing 0.09% sodium azide and 0.2% BSA (BSA Country of Origin USA)																																						
Storage:	2-8°C and protected from light. Do not freeze																																						

PRODUCT DESCRIPTION

The Cytek® cFluor® TBMNK Kit allow for the identification of lymphocytes, total T cells, helper T cells, cytotoxic T cells, NKT cells, B cells, NK cells, total monocytes, nonclassical and classical monocytes in human peripheral blood mononuclear cells and in whole blood.

CD3 is expressed on all mature T cells, NKT 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.

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 has a role in T cell activation and in thymic differentiation.

CD14 is also known as a high affinity LPS receptor and is highly expressed on monocytes and macrophages. 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.



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Technical Data Sheet

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.

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.

REFERENCES

- Clevers H et al. Ann Rev Immunol. 1988 **6**, 629 (1988)
Evans RL et al. Immunol. **78**, 544 (1981)
Cole DK et al. Cell Mol Immunol. **1**, 81 (2004)
Ferrero E et al. J. Immunol. **145**, 331 (1990)
Wirthmueller U et al. J Exp Med. **175**, (1992)
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Poli A et al. Immunology. **126**, 458 (2009)

RECOMMENDED USAGE

Human peripheral mononuclear cells (PBMC) or whole blood has been tested to validate the performance of this kit. Please refer to the product web page for the staining protocol, fluorochrome tag list, experiment template, and data acquisition protocol.

Please briefly centrifuge the reagent vial before use.

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

¹ cFluor® BYG710 is a tandem dye 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.

² cFluor® B515, cFluor® R668, cFluor® R720, and cFluor® V547 are equivalent to CF®488A, CF®647, CF®700, and CF®405L respectively, manufactured and provided by Biotium, Inc. under an Agreement between Biotium and Cytex (LICENSEE). The manufacture, use, sale, offer for sale, or import of the product is covered by one or more of the patents or pending applications owned or licensed by Biotium. The purchase of this product includes a limited, non-transferable immunity from suit under the foregoing patent claims for using only this amount of product for the purchaser's own internal research. No right under any other patent claim, no right to perform any patented method, and no right to perform commercial services of any kind, including without limitation reporting the results of purchaser's activities for a fee or other commercial consideration, is conveyed expressly, by implication, or by estoppel.

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

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