



# CD3 antibodies – functional grade human

CD3-Biotin  
CD3 pure

130-093-377  
130-093-387

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## 1. Description

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| <b>Components</b>     | <b>100 µg in 1 mL CD3-Biotin – functional grade, human:</b><br>monoclonal CD3 antibody conjugated to biotin or<br><b>100 µg in 1 mL CD3 pure – functional grade, human.</b> |
| <b>Clone</b>          | OKT3 (isotype: mouse IgG2a).  |
| <b>Product format</b> | Antibodies are supplied in phosphate-buffered saline (PBS), pH 7.2. Endotoxin levels have been tested and do not exceed 0.01 ng/µg of protein.                              |
| <b>Storage</b>        | Store protected from light at 2–8 °C. Do not freeze. The expiration date is indicated on the vial label.  |

*This product contains no preservative and is sterile filtered; always handle under aseptic conditions.*

### 1.1 Background information

The CD3 antigen is present on mature human T cells, thymocytes and NKT cells. It is associated with the T cell receptor (TCR) and is responsible for the signal transduction via the TCR. The CD3 antigen is a complex of 5 invariable chains:  $\gamma$ ,  $\delta$ ,  $\epsilon$ ,  $\zeta$ , and  $\eta$ . The CD3 antibody recognizes all T cells, i.e., it reacts with 70–80% of human peripheral blood lymphocytes and with 65–85% of thymocytes. The epitope recognized by the antibody is located on the  $\epsilon$ -chain of the CD3 complex. The OKT3 antibody can be used for the activation and expansion of T cells.

### 1.2 Applications

- *In vitro* T cell activation and expansion in combination with CD2 and CD28 antibodies.<sup>1</sup> T cells can be isolated, for example, by using CD4 MicroBeads (# 130-045-101), and the CD4<sup>+</sup> T Cell Isolation Kit II (# 130-091-155).
- T cell activation and expansion by using CD3-Biotin – functional grade in combination with CD28-Biotin – functional grade (# 130-093-386), CD2-Biotin – functional grade (# 130-093-376), or Anti-Biotin MACSiBead™ Particles, cell culture grade (# 130-092-357).

### 1.3 Reagent requirements

- (Optional) CD28 pure – functional grade (# 130-093-375), CD28-Biotin – functional grade (# 130-093-386), or CD2-Biotin – functional grade (# 130-093-376) for T cell activation and expansion.
- (Optional) Anti-Biotin MACSiBead Particles, cell culture grade (# 130-092-357).

## 2. References

1. Lecureuil, C. *et al.* (2007) Trapping and apoptosis of novel subsets of memory T lymphocytes expressing CCR6 in the spleen of HIV-infected patients. *Blood* 109: 3649–3657.

All protocols and data sheets are available at [www.miltenyibiotec.com](http://www.miltenyibiotec.com).

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