CD28 (L293)

DESCRIPTION

Specificity

The CD28 antibody specifically binds to a 44-kilodalton (kDa) disulfide-linked homodimeric glycoprotein. CD28 is also known as TP44.

Antigen distribution

The CD28 antigen is present on approximately 60% to 80% of peripheral blood T (CD3+) lymphocytes, 95% of CD4+ T lymphocytes, 50% of CD8+ T lymphocytes, and 5% of immature CD3- thymocytes.1-4 The amount of CD28 expressed increases during thymocyte maturation; the levels are further increased upon T-cell activation. Expression of CD28 divides CD8+ T lymphocytes into two functional groups. CD8+CD28+ T lymphocytes tend to have long-term proliferative capacity in vitro and in vivo, while CD8+CD28- T lymphocytes are thought to be effector cells with limited proliferative capacity.5

CD28 is a co-stimulatory receptor that binds CD80 and CD86,6,7 which are present on activated B lymphocytes,8 monocytes,9 and dendritic cells,10,11 and plays an important role in T-cell–B-cell interactions. It has been suggested that CD28 initiates and regulates a separate and distinct signal transduction pathway from those stimulated by the TCR complex.12 Interaction of CD28 with CD80 or CD86, or both, provides a co-stimulus for T-cell proliferation, cytokine secretion, and cytotoxicity.13 Additionally, it has been reported that CD28 monoclonal antibodies vary in their ability to stimulate T cells to produce IL-2 and increase intracellular Ca2+ concentrations.14

Clone

The CD28 antibody, clone L293,15 is derived from the hybridization of Sp2/0-Ag14 mouse myeloma cells with spleen cells isolated from BALB/c mice immunized with the HPB-ALL T-cell line.

Composition

The CD28 antibody is composed of mouse IgG1 heavy chains and kappa light chains.

Product configuration

The following is supplied in phosphate buffered saline (PBS) containing a stabilizer and a preservative.

<table>
<thead>
<tr>
<th>Form</th>
<th>Number of tests</th>
<th>Volume per test (µL)a</th>
<th>Amount provided (µg)</th>
<th>Total volume (mL)</th>
<th>Concentration (µg/mL)</th>
<th>Stabilizer</th>
<th>Preservative</th>
</tr>
</thead>
<tbody>
<tr>
<td>PerCP-Cy5.5</td>
<td>50</td>
<td>20</td>
<td>6.0</td>
<td>1.0</td>
<td>6</td>
<td>Gelatin</td>
<td>0.1% Sodium azide</td>
</tr>
</tbody>
</table>

a. Volume required to stain 10⁶ cells.

Analyte Specific Reagent. Analytical and performance characteristics are not established.
Purity
PerCP-Cy5.5: ≤20% free fluorophore at bottling, as measured by size-exclusion chromatography (SEC)

HANDLING AND STORAGE
Store vials at 2°C–8°C. Conjugated forms should not be frozen. Protect from exposure to light. Each reagent is stable until the expiration date shown on the bottle label when stored as directed.

WARNING
All biological specimens and materials coming in contact with them are considered biohazards. Handle as if capable of transmitting infection and dispose of with proper precautions in accordance with federal, state, and local regulations. Never pipette by mouth. Wear suitable protective clothing, eyewear, and gloves.

CHARACTERIZATION
To ensure consistently high-quality reagents, each lot of antibody is tested for conformance with characteristics of a standard reagent.

WARRANTY
Unless otherwise indicated in any applicable BD general conditions of sale for non-US customers, the following warranty applies to the purchase of these products.

REFERENCES
9. Fleischer J, Soeth E, Reiling N, Grage-Griebenow E, Flad HD, Ernst M. Differential expression and function of CD80 (B7-1) and CD86 (B7-2) on human peripheral blood monocytes. Immunology. 1996;89:592-598.


**Cy™** is a trademark of GE Healthcare. This product is subject to proprietary rights of GE Healthcare and Carnegie Mellon University, and is made and sold under license from GE Healthcare. This product is licensed for sale only for in vitro diagnostics. It is not licensed for any other use. If you require any additional license to use this product and do not have one, return this material, unopened, to BD Biosciences, 2350 Qume Drive, San Jose, CA 95131, and any money paid for the material will be refunded.

BD, BD Logo and all other trademarks are property of Becton, Dickinson and Company. © 2015 BD