Technical Data Sheet
InVivoMAb anti-human CD28

**Attention:** Use of this product constitutes an agreement to Bio X Cell's Terms and Conditions which are included with this product in print and can also be found at https://bioxcell.com/terms-and-conditions.

**Lot Specific Information**

- **Lot Number:** Lot Specific*
- **Volume:** Lot Specific*
- **Concentration:** Lot Specific* (generally 4 to 11 mg/ml) *
- **Total Protein:** Lot Specific*

*This information will be noted on the certificate of analysis that ships with this product.

**Product Information**

- **Catalog Number:** BE0248
- **Clone:** 9.3
- **Isotype:** Mouse IgG2a
- **Recommended Isotype Control(s):** InVivoMAb mouse IgG2a isotype control, unknown specificity
- **Recommended Dilution Buffer:** InVivoPure pH 7.0 Dilution Buffer
- **Immunogen:** Human T lymphocytes
- **Reported Applications:** *in vitro* T cell stimulation/activation
- **Formulation:** PBS, pH 7.0
  - Contains no stabilizers or preservatives
- **Endotoxin:** <2EU/mg (<0.002EU/μg)
  - Determined by LAL gel clotting assay
- **Purity:** >95%
  - Determined by SDS-PAGE
- **Sterility:** 0.2 μm filtered
- **Production:** Purified from tissue culture supernatant in an animal free facility
- **Purification:** Protein G
- **RRID:** AB_2687729
- **Molecular Weight:** 150 kDa

**Description**
The 9.3 monoclonal antibody reacts with human CD28, a 45 kDa costimulatory receptor and a member of the Ig superfamily. CD28 is expressed by thymocytes, most peripheral T cells, and NK cells. CD28 is a receptor for CD80 (B7-1) and CD86 (B7-2). Signaling through CD28 augments IL-2 and IL-2 receptor expression as well as cytotoxicity of CD3-activated T cells. The 9.3 antibody has been shown to stimulate the proliferation of human T cells in vitro.

**Shelf-Life and Storage**
Store at the stock concentration at 4°C. Do not freeze.

All Bio X Cell antibodies have a guaranteed shelf-life of one year from the date of customer receipt when stored as recommended. It is not uncommon for a floccule or precipitate to appear during storage. The floccule is typically buffer salts precipitating out of solution or a small bit of protein aggregation. For information on how to remove floccules or precipitates see our FAQ's at https://bioxcell.com/faqs.

**Protocol Information**
Since applications vary, each investigator should use the application references as a guide to help estimate the appropriate dose or concentration. The dose or concentration can be further optimized experimentally in a dose response or titration experiment.
Application References
For a complete list of references, visit https://bioxcell.com/catalogsearch/result/?q=BE0248#tab_references or scan the QR code below.

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