Technical Data Sheet

InVivoMAb anti-mouse CD28

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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 Website Link: https://bioxcell.com/invivomab-anti-mouse-cd28-be0500

Product Information

Catalog Number:	**BE0500**
Clone:	**E18**
Isotype:	Mouse IgG2b, κ
Recommended Isotype Control(s):	InVivoMAb mouse IgG2b isotype control, unknown specificity
Recommended Dilution Buffer:	InVivoPure pH 7.0 Dilution Buffer
Immunogen:	A20 cells expressing mCD28 and recombinant mCD28-Ig
Reported Applications:	*in vivo* blocking of CD28-B7 signaling *in vitro* blocking of CD28-B7 signaling *in vitro* T cell co-stimulation with anti-CD3 *in vitro* Organoids/Organ-on-Chip *in vitro* functional assay Flow cytometry
Formulation:	PBS, pH 7.0 Contains no stabilizers or preservatives
Endotoxin:	≤1EU/mg (≤0.001EU/μg) Determined by LAL assay
Purity:	≥95% Determined by SDS-PAGE
Sterility:	0.2 μm filtration
Production:	Purified from cell culture supernatant in an animal-free facility
Purification:	Protein G
RRID:	
Molecular Weight:	150 kDa

Description

The E18 monoclonal antibody reacts with mouse T-cell-specific surface glycoprotein CD28 (mCD28), a co-stimulatory receptor and member of the Ig superfamily. CD28 is expressed by thymocytes, most peripheral T cells, and subsets of NK cells. CD28 is a receptor for B7 molecules: 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. In the presence of TCR/CD3 engagement and CD40L-mediated co-stimulation, CD28 enhances IL-4 and IL-10 production in T cells. In preclinical research, targeting mouse CD28 with functional-grade antibodies enables precise modulation of the CD28 co-stimulatory pathway, which is essential for T cell activation, survival, and prevention of anergy. The conventional anti-mouse CD28 antibodies such as E18 and 37.51 are B7-binding site-specific antagonistic antibodies that inhibit CD28 interactions with their natural/cognate ligands, CD80 or CD86, while paradoxically co-stimulating T cells in vitro (i.e., with anti-CD3, it boosts TCR-driven activation). Unlike 37.51, the E18 antibody completely blocks CD28 ligation by B7 molecules. Under in vivo conditions, the E18 antibody is reported to inhibit CD28 signaling, reduce Treg frequencies, and prevent GVHD or suppress T-cell responses to superantigens, offering dual

utility for studying immune regulation and autoimmune disease models.

Storage

Store at the stock concentration at 4°C . **Do not freeze.**
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/invivomab-anti-mouse-cd28-be0500?utm_source=cr9k1b#tab_references or scan the QR code below.

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