Technical Data Sheet

InVivoMAb anti-mouse/human CD6

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:	**BE0481**
Clone:	**6C1**
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:	Recombinant mouse CD6 protein
Reported Applications:	*in vitro* functional blockade of CD6 *in vivo* functional blockade of CD6 *in vitro* functional assay Flow cytometry ELISA
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 filtered
Production:	Purified from cell culture supernatant in an animal-free facility
Purification:	Protein A
Molecular Weight:	150 kDa

Description

The 6C1 monoclonal antibody reacts with mouse and human T-cell differentiation antigen CD6, a single-pass type I membrane protein that is predominantly expressed in the thymus, lymph node, and spleen. CD6 is a receptor for CD166/ALCAM and CD318 (CDCP1), and its binding partners include the TCR/CD3 complex subunit CD3E, LCP2, VAV1, LGALS1, and LGALS3. CD6 acts as a cell adhesion molecule, and through its interaction with ALCAM/CD166, CD6 mediates cell-cell contacts and regulates T-cell responses. CD6 is involved in TCR/CD3-mediated signaling cascades, and it functions as a costimulatory molecule, thereby promoting T-cell activation and proliferation. In infection biology, the CD6 molecule functions as a calcium-dependent pattern receptor that binds to and aggregates both Gram+ and Gram- bacteria. The binding of CD6 with bacterial LPS triggers signaling cascades (upstream of MAP kinases) and mediates activation of the inflammatory response as well as the secretion of pro-inflammatory cytokines. In the experimental autoimmune uveitis (EAU) model, knockout of CD6 or functional blockade of CD6 with anti-CD6, clone 6C1, was demonstrated to reduce autoreactive T cell responses and significantly attenuate retinal inflammation. In cancer immunotherapy research, the unique expression profile of CD6 on immune cells and its ligands on cancer cells makes it an attractive target for in vivo functional-grade antibodies.

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/be0481?bxcs=9k1b3a#tab_references or scan the QR code below.

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