

Technical Data Sheet



Bispecific anti-mouse PD-L1 x anti-mouse VEGF (LALA-PG)

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: CPB514
Clone: Derived from clones 2G11-2A05 and 10F.9G2
Isotype: mouse IgG2a (LALA-PG)-scFv, κ
Recommended Isotype Control(s): Bispecific mouse IgG2a (LALA-PG)-scFv, kappa isotype control
Recommended Dilution Buffer: InVivoPure pH 7.0 Dilution Buffer
Mutations: LALA-PG
Reported Applications: ELISA
For information on in-vivo applications, please contact technicalservice@bioxcell.com
Formulation: PBS, pH 7.0
Contains no stabilizers or preservatives
Endotoxin: $\leq 0.5\text{EU/mg}$ ($\leq 0.0005\text{EU}/\mu\text{g}$)
Determined by LAL assay
Purity: $\geq 95\%$
Determined by SDS-PAGE
Sterility: 0.2 μm filtration
Production: Purified from mammalian cell supernatant in an animal-free facility
RRID:
Molecular Weight: 200.2

Murine Pathogen Test Results

Mouse Norovirus: Negative, Mouse Parvovirus: Negative, Mouse Minute Virus: Negative, Mouse Hepatitis Virus: Negative, Reovirus Screen: Negative, Lymphocytic Choriomeningitis virus: Negative, Lactate Dehydrogenase-Elevating Virus: Negative, Mouse Rotavirus: Negative, Theiler's Murine Encephalomyelitis: Negative, Ectromelia/Mousepox Virus: Negative, Hantavirus: Negative, Polyoma Virus: Negative, Mouse Adenovirus: Negative, Sendai Virus: Negative, Mycoplasma Pulmonis: Negative, Pneumonia Virus of Mice: Negative, Mouse Cytomegalovirus: Negative, K Virus: Negative

Description

CPB514 is a 2+2 symmetric tetravalent bispecific engineered to simultaneously target mouse programmed death-ligand 1 (PD-L1, CD274, B7-H1) and mouse vascular endothelial growth factor A (VEGF-A), integrating checkpoint inhibition and anti-angiogenesis into a single molecule. CPB514 contains the murine IgG2a constant region to reduce immunogenicity and the formation of anti-drug antibodies (ADAs) in mouse models and LALA-PG Fc-silencing mutations to abolish antibody-dependent cell-mediated cytotoxicity (ADCC) and complement-dependent cytotoxicity (CDC) while minimizing Fc-driven off-target toxicity and focusing the mechanism on checkpoint/angiogenesis blockade rather than target-cell depletion. The PD-L1 arm binds tumor and myeloid PD-L1 to prevent interaction with PD-1 on T cells, restoring TCR signaling, NFAT activation, proliferation and cytotoxic function of effector T cells. The VEGF arm sequesters VEGF-A, preventing engagement of VEGFR1/2 on endothelial cells and inhibits downstream PI3K-AKT-mTOR and related pathways that drive angiogenesis, vascular permeability and tumor growth. Relieving PD-1/PD-L1-mediated immunosuppression and blocking VEGF-driven angiogenesis with cooperative binding can enrich bispecific molecules within VEGF/PD-L1-rich tumor microenvironments.

This dual targeting can localize anti-VEGF activity to PD-L1–expressing tumor sites while enhancing T-cell activation and vascular normalization.

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/cpb514?bxcs=9k1b3a#tab_references or scan the QR code below.



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