

# Technical Data Sheet

## InVivoMAb anti-rat pan-CD45 (OX1)



**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://bioxccl.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: BE0474  
Clone: OX-1  
Isotype: Mouse IgG1,  $\kappa$   
Recommended Isotype Control(s): InVivoMAb mouse IgG1 isotype control, unknown specificity  
Recommended Dilution Buffer: InVivoPure pH 7.0 Dilution Buffer  
Immunogen: Rat thymocyte membrane glycoproteins  
Reported Applications: *in vivo* functional assay  
*in vitro* functional assay  
Immunohistochemistry (frozen)  
Immunohistochemistry (paraffin)  
Flow cytometry  
Immunofluorescence  
Immunoprecipitation  
Formulation: PBS, pH 7.0  
Contains no stabilizers or preservatives  
Endotoxin:  $\leq 1\text{EU/mg}$  ( $\leq 0.001\text{EU}/\mu\text{g}$ )  
Determined by LAL gel clotting assay  
Purity:  $\geq 95\%$   
Determined by SDS-PAGE  
Sterility: 0.2  $\mu\text{m}$  filtered  
Production: Purified from cell culture supernatant in an animal-free facility  
Purification: Protein G  
RRID:  
Molecular Weight: 150 kDa

### Description

OX-1 is a pan-CD45 antibody that reacts with a common epitope present on all isotypes of rat CD45. The CD45 protein is also called leukocyte common antigen (LCA), RT7, T200, and protein tyrosine phosphatase, receptor type C (Ptpcr). CD45 is a highly glycosylated protein with a molecular weight ranging from 142 to 220 kDa. CD45 is largely expressed in the lymphoid system, but it is also found in all hematopoietic cells except erythrocytes and platelets. Thymocytes and lymph nodes express CD45 isoforms 1 and 2, whereas other tissues express CD45 isoforms to varying levels depending on cell type and maturity or activation status. Functionally, CD45 is a protein tyrosine-protein phosphatase (PTPase), and its activity is enhanced by CD45-CD53 interaction. CD45 also binds to SKAP1, DPP4, GANAB, PRKCSH, and CLEC10A. CD45 interacts with DPP4 in activated lymphocytes in an interleukin-12-dependent manner, and it positively regulates T-cell coactivation. CD45 operates as a "signaling gatekeeper" by altering immune cell activation thresholds via its PTPase activity. Cancer cells use this phenomenon to avoid the immune system in the tumor microenvironment, and knowing the mechanisms offers opportunities for cancer immunotherapy.

## 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/be0474?bxcs=9k1b3a#tab\\_references](https://bioxcell.com/be0474?bxcs=9k1b3a#tab_references) or scan the QR code below.



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**Bio X Cell, LLC**

<https://bioxcell.com>

+1-866-787-3444

[customerservice@bioxcell.com](mailto:customerservice@bioxcell.com)

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*Not for resale.*

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