Technical Data Sheet

InVivoMAb anti-human/porcine/mouse/rat MR1

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Lot Specific Information

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

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

Product Information

Catalog Number:	**BE0499**
Clone:	**26.5**
Isotype:	Mouse IgG2a, κ
Recommended Isotype Control(s):	InVivoMAb rat IgG2a isotype control, anti-trinitrophenol
Recommended Dilution Buffer:	InVivoPure pH 7.0 Dilution Buffer
Immunogen:	Soluble ectodomain of insect-expressed human MR1/β2m complexes
Reported Applications:	*in vitro* blocking of MR1-dependent MAIT cell activation *in vitro* functional assay Immunoprecipitation Immunofluorescence 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 G
Molecular Weight:	150 kDa

Description

The 26.5 monoclonal antibody reacts with a conformation-dependent epitope on the fully folded form of MHC-related protein 1 (MR1) of human, mouse, rat, pig (porcine), and cattle (bovine) species. MR1 is a highly conserved, nonclassical MHC class I-related antigen-presenting molecule that is required for the development and expansion of the mucosal-associated invariant T (MAIT) cells. MAITs are an innate-like T-cell population found in blood and multiple tissues, including the liver and intestinal mucosa. The MAIT cell-restricting molecule MR1 is highly conserved but functional. MR1 has been lost or inactivated in some placental mammals, including dogs and rabbits. The correlated conservation and loss of MR1 and the MAIT-associated TRAV1 expression patterns across mammalian lineages support their coevolution. Importantly, MR1's cell-surface expression is generally low and strongly regulated by ligand binding. MR1 binds small-molecule ligands, including metabolites derived from microbial riboflavin (vitamin B2) biosynthesis and certain drugs or drug-like compounds, that can stimulate or inhibit MAIT-cell responses. Once activated, MAIT cells contribute to antimicrobial immunity and can have protective or pathogenic effects in inflammatory disease and cancer. Owing to MAIT cells' protective and/or pathogenic role in diseases, these cells, as well as their restricting molecule MR1, are emerging as potential targets for immunotherapy. In functional studies, clone 26.5 is used to block MR1-dependent MAIT-cell activation in vitro. In some studies, the functional

blocking assays have used the isotype-matched, HLA class I–specific antibody W6/32 as a comparator to assess MR1 dependence.

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 ?utm_source=cr9k1b#tab_references or scan the QR code below.

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