

Technical Data Sheet

RecombiMAb anti-mouse HER2 (domain I) (CD340)



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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*

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

Product Website Link: <https://bioxcell.com/recombimab-anti-mouse-her2-domain-i-cd340-cp109>

Product Information

Catalog Number: CP109
Clone: H2Mab-304-CP109
Isotype: Mouse IgG2a, κ
Recommended Isotype Control(s): RecombiMAb mouse IgG2a isotype control, unknown specificity
Recommended Dilution Buffer: InVivoPure pH 7.0 Dilution Buffer
Immunogen: Mouse HER2-overexpressing LN229 cells
Reported Applications: ELISA
Flow cytometry
For details on *in vivo* applications, please contact technicalservice@bioxcell.com
Formulation: PBS, pH 7.0
Contains no stabilizers or preservatives
Endotoxin: ≤ 0.5 EU/mg (≤ 0.0005 EU/ μ g)
Determined by LAL assay
Purity: $\geq 95\%$
Determined by SDS-PAGE
Sterility: 0.2 μ m filtration
Production: Purified from mammalian cell supernatant in an animal-free facility
Purification: Protein G
Aggregation: $< 5\%$
Determined by SEC
RRID:
Molecular Weight: 150 kDa

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

The H2Mab-304-CP109 monoclonal antibody is a chimeric version of the original H2Mab-304 antibody. The variable domain sequences are identical but the constant region sequences have been switched from Rat IgG1, κ to Mouse IgG2a, κ . H2Mab-304-CP109 has an effector function competent Fc domain allowing for activation of Fc γ receptors (Fc γ Rs) to trigger antibody-dependent cellular cytotoxicity (ADCC), antibody-dependent cellular phagocytosis (ADCP),

complement-dependent cytotoxicity (CDC) and opsonization to promote target cell depletion. The mouse IgG2a isotype demonstrates strong effector functions due to potent interaction with mFcγRIV, which is functionally similar to the FcγRIIIa receptor involved in human ADCC. Species-matched chimeric antibodies result in less immunogenicity and formation of anti-drug antibodies (ADAs) than xenogenic antibodies in animal models. The highly controlled sequence and lack of genetic drift in recombinant antibodies provide more reliable and reproducible results over hybridoma derived antibodies. The H2Mab-304-CP109 monoclonal antibody reacts with domain I of mouse receptor tyrosine-protein kinase erbB-2 (ERBB2), also known as human epidermal growth factor receptor 2 (HER2), CD340, or NEU. HER2 is a 185 kDa transmembrane receptor tyrosine kinase that is part of the EGFR family. The HER2 receptor contains a cytoplasmic tyrosine kinase domain, multiple cytoplasmic tyrosine residues that function as phosphorylation sites, a hydrophobic single-pass transmembrane domain, and an extensive extracellular domain (ECD) subdivided into four functional domains (I, II, III, and IV). Domains I and III facilitate ligand binding, domain II reinforces protein-protein interactions during dimerization, and domain IV stabilizes interactions between HER2 and its dimerization partner. HER2 lacks identified ligands; nonetheless, its homodimerization (HER2/HER2) and heterodimerization (EGFR/HER2, HER2/HER3, and HER2/HER4) facilitate HER2 activation, subsequently modulating downstream signaling pathways, including PI3K/Akt/mTOR and NF-κB. HER2 is essential for cell proliferation, survival, and differentiation, and in cancers, dysregulated HER2 signaling or its overexpression often correlates with aggressive tumor growth. In addition to breast cancer, HER2 is overexpressed in gastric, gastroesophageal, colorectal, lung, endometrial, and ovarian cancers.

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/recombimab-anti-mouse-her2-domain-i-cd340-cp109?utm_source=cr9k1b#tab_references or scan the QR code below.



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