Technical Data Sheet

RecombiMAb anti-mouse/human/canine HER2 (domain III) (CD340)

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:	**CP108**
Clone:	**H2Mab-19-CP108**
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:	Recombinant human HER2 extracellular domain
Reported Applications:	Flow cytometry ELISA *in vivo* antitumor activity in HER2+ models* *in vitro* induction of ADCC in HER2+ cells* *in vitro* induction of CDC in HER2+ cells* Immunohistochemistry (frozen)* *Reported for clone H2Mab-19. For information on *in vivo* applications, please contact technicalservice@bioxcell.com
Formulation:	PBS, pH 7.0 Contains no stabilizers or preservatives
Endotoxin:	≤0.5EU/mg (≤0.0005EU/μg) Determined by LAL assay
Purity:	≥95% Determined by SDS-PAGE
Sterility:	0.2 μm filtration
Production:	Purified from mammalian cell supernatant in an animal-free facility
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-19-CP108 monoclonal antibody is a recombinant, Fc-engineered chimeric version of the original H2Mab-19 antibody. The variable domain sequences are identical but the constant region sequences have been switched from Mouse IgG2b, κ to Mouse IgG2a, κ. Effector functions significantly enhance the efficacy of anti-HER2 antibodies by enabling

antibody-dependent cellular cytotoxicity (ADCC), phagocytosis (ADCP), complement-dependent cytotoxicity (CDC) and opsonization to promote immune-mediated tumor clearance beyond HER2 signaling blockade alone. Mouse IgG2a has broader and higher-affinity interactions with activating FcγRs than mouse IgG2b, resulting in increased effector functions. The highly controlled sequence and lack of genetic drift in recombinant antibodies provide more reliable and reproducible results over hybridoma derived antibodies. The H2Mab-19 monoclonal antibody reacts with domain III of mouse, human and canine 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-kB. 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. The H2Mab-19 antibody has been shown to have anti-tumor activity in HER2+ xenograft models.

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/cp108?bxcs=9k1b3a#tab_references or scan the QR code below.

Bio X Cell, LLC
https://bioxcell.com
+1-866-787-3444
customerservice@bioxcell.com