Anti-HER2 [C7b] Bulk Size Ab00924-1.9-BT

This chimeric mouse antibody was made using the variable domain sequences of the original VHH format, for improved compatibility with existing reagents, assays and techniques.

Isotype and Format: Mouse IgG1-Fc fusion, His-Tagged
Clone Number: C7b
Alternative Name(s) of Target: NEU; HER-2; HER-2/neu; ERBB2; CD340; MLN 19; NGL; TKR1; erb-b2 receptor tyrosine kinase 2; Receptor tyrosine-protein kinase erbB-2; Metastatic lymph node gene 19 protein; Proto-oncogene Neu; Proto-oncogene c-ErbB-2; Tyrosine kinase-type cell surface receptor HER2
UniProt Accession Number of Target Protein: P04626
Published Application(s): cytometric bead array, WB, ELISA, FC, IHC
Published Species Reactivity: Human
Immunogen: A llama was immunized with the HER2-expressing ovarian cancer cell line SKOv3 and a sdAb phage display library was built and used to perform biopannings. The first round of selection was performed on a purified recombinant HER2 ectodomain fused to a human Fc portion (HER2-Fc) followed by a second round on an HER2-positive SKBr3 cell line. After selection, 188 clones were screened and 92 clones were found to be positive by ELISA on HER2 positive cells. Twenty clones were analyzed by sequencing, and all of them corresponded to a unique clone named C7b.
Specificity: C7b specifically recognises HER2 at a different epitope to that recognised by Herceptin. HER2 is a protein tyrosine kinase that is part of several cell surface receptor complexes, but that apparently needs a coreceptor for ligand binding. Essential component of a neuregulin-receptor complex, although neuregulins do not interact with it alone.
Application Notes: The fine specificity of this antibody was determined by ELISA. The ELISA was preformed using the VHH version of this antibody on HER2 fused to an fc fragment. Furthermore the ability of the antibody to bind to cells expressing HER2 was assessed. This was done by flow cytometry on cells overexpressing HER2 using the VHH version of this antibody (Even-Desrumeaux et al, 2012; pmid:22772166). To assess the reactivity of this antibody, a dot blot was preformed on a ErbB2/HER2 Fc Chimera Protein using the VHH version of the antibody. Further, both a cytotoxicity assay and an internalization assay were preformed using this antibody bound to a model therapeutic nanoparticle (Vorotnikov et al, 2020; pmid:33107540). C7b has also been used to enrich breast cancer cells (SKBr3) from a large excess of human peripheral blood mononuclear cells (Even-Desrumeaux 2012).
Antibody First Published in: Even-Desrumeaux et al. Single-domain antibodies: a versatile and rich

source of binders for breast cancer diagnostic approaches Mol. BioSyst., 2012, 8, 2385–2394 PMID:22772166

Note on publication: Describes the generation of single-domain antibody fragments against cancer-specific antigens for the use in diagnostic tests for breast cancer, such as ELISA, IHC and microarray multiplex protein measurement by biomarker-based molecule diagnostic and prognostic cancer testing assays.

Product Form

Size: 1 mg Purified antibody in bulk size.
Purification: Purified by Immobilized Metal Affinity Chromatography
Supplied In: PBS only.
Storage Recommendation: Store at 4^{0}C for up to 3 months. Note, this antibody is provided without added preservatives, it is therefore recommed this antibody be handled under sterile conditions. For longer storage, aliquot and store at -20^{0}C.
Concentration: 1 mg/ml.

Important note – This product is for research use only. It is not intended for use in therapeutic or diagnostic procedures for humans or animals.