Anti-CD45 [BC8] Bulk Size Ab03391-10.3-BT

This antibody was created using our proprietary Fc Silent™ engineered Fc domain containing key point mutations that abrogate binding to Fc gamma receptors.

This chimeric human antibody was made using the variable domain sequences of the original Mouse IgG1 format for improved compatibility with existing reagents assays and techniques.

Isotype and Format: Human IgG1, Fc Silent™, Kappa
Clone Number: BC8
Alternative Name(s) of Target: Receptor-type tyrosine-protein phosphatase C; L-CA; Leukocyte common antigen; T200; Lymphocyte antigen 5
UniProt Accession Number of Target Protein: P08575
Published Application(s): in vivo, therapeutic, FC
Published Species Reactivity: Human
Immunogen:
Specificity: The antibody is specific for CD45, binding to all CD45 isoforms. CD45 is a 180-240kD glycoprotein member of the protein tyrosine phosphatase (PTP) family known for its involvement in regulating a variety of cellular processes, including cell growth, differentiation, mitotic cycle, and oncogenic transformation.
Application Notes: The antibody was used to target human Ramos lymphoma xenografts in athymic mice. The antibody was able to deliver radioiodine to tumors, causing minimal toxicity to normal organs. Further, therapy experiments demonstrated that 90Y-(DOTA)–biotin with BC8-SA cured the mice in a dose dependent manner, and with complete remission of the antibody (Pagel et al., 2003; PMID: 12446461). In vivo studies on Macaca nemestrine revealed the 131I-labeled IgG1 antibody could deliver radiation with relative specificity to lymphohematopoietic tissues. The antibody displayed an association constant (avidity) of 6 x 10^7 (L/mol) for macaque cells and 5 x 10^8 (L/mol) for human cells (Matthews et al., 1991; PMID: 1832994). Furter, 211At labeled BC8-B10 is of interest for clinical trials involving allogeneic hematopoietic transplantation in the treatment of advanced hematological malignancies (Li et al., 2018; PMID: 30335787). 125I-BC8 was stably retained on the surface of lymphoma cells without appreciable endocytosis or shedding (Press et al., 1994; PMID: 8118040). 90Y-BC8-DOTA in combination with Fludarabine and TBI entered phase I Trial as conditioning for allogeneic peripheral blood stem cell transplant (Tuazon et al., 2017). The humanized version of the antibody was constructed. This antibody was used for detection of cytotrol cells by flow cytometry. The antibody was radiolabeled with actinium-225

(225AC) or lutetium-177 (177Lu), and used as therapeutic for the treatment of malignant and non-malignant hematological diseases and disorders (WO2021055638).
Antibody First Published in: Matthews et al. Radiolabeled anti-CD45 monoclonal antibodies target lymphohematopoietic tissue in the macaque Blood. 1991 Oct 1;78(7):1864-74. PMID:1832994
Note on publication: The original paper describes the reactivity of the 131I-labeled antibody with the CD45 antigen in Macaca nemestrina.

Product Form

Size: 1 mg Purified antibody in bulk size.
Purification: Protein A affinity purified
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.