

Anti-CD98 heavy chain [HBJ127] Bulk Size Ab00794-10.3-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: HBJ127

Alternative Name(s) of Target: 4F2hc; HBJ 127; HBJ-127; CD98; GP125; 4F2 cell-surface antigen heavy chain; 4F2 heavy chain antigen; Lymphocyte activation antigen 4F2 large subunit; Solute carrier family 3 member 2

UniProt Accession Number of Target Protein: P08195

Published Application(s): Activate, Block, ELISA, IF

Published Species Reactivity: Human

Immunogen: HBJ127 was obtained from hybridomas generated by the fusion of mouse myeloma cells and spleen cells from mice which had been immunized with T24 human bladder cancer cells.

Specificity: HBJ127 binds to the CD98 heavy chain at an epitope consisting of residues AFS (aa 442-444) (Itoh et al, 2007). The antibody has not been shown to cross-react with other species. CD98 is expressed at high levels on monocytes and at very low level on peripheral blood T and B lymphocytes, splenocytes, NK cells and granulocytes. CD98 is a disulfide-linked and glycosylated type II integral membrane protein. This protein has roles in normal and neoplastic cell growth and is required for the function of light chain amino acid transporters. It is also involved in sodium-independent transport of large neutral amino acids and in guiding and targeting LAT1 and LAT2 to the plasma membrane. When associated with SLC7A6 or SLC7A7, CD98 acts as an arginine/glutamine exchanger.

Application Notes: HBJ127 can inhibit lymphocyte activation and proliferation in vitro (Yagita and Hashimoto, 1986), as well as inhibit the growth of human bladder tumors (Yagita, 1986). The antibody also mediates the inhibition of DNA synthesis of Con A-stimulated lymphocytes at concentrations greater than 13 µg/ml, the inhibition of mAb 6-1-13-induced c-src expression and the inhibition of mAb 6-1-13-induced polykaryocyte formation. In addition, HBJ127 can enhance expression of the mannose receptor on the surface of monocytes derived from healthy humans. HBJ127 shows positive staining of murine L929 cells transiently expressing human CD98 heavy chain in IF studies. The antibody can also be used to detect

CD98 heavy chain by ELISA.

Antibody First Published in: Yagita et al. Monoclonal antibodies that inhibit activation and proliferation of lymphocytes. I. Expression of the antigen on monocytes and activated lymphocytes. J Immunol. 1986 Mar 15;136(6):2055-61. [PMID:3950410](#)

Note on publication: Describes the in vitro effect of HBJ127 and other mAbs on lymphocyte activation and proliferation, and gave evidence to suggest that the HBJ127 antigen was important in the activation of lymphocytes and its subsequent progression through the cell cycle.

Product Form

Size: 1 mg Purified antibody in bulk size.

Purification: Protein A affinity purified

Supplied In: PBS only.

Storage Recommendation: Store at 4°C for up to 3 months. Note, this antibody is provided without added preservatives, it is therefore recommended this antibody be handled under sterile conditions. For longer storage, aliquot and store at -20°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.