Anti-LDL Receptor [C7] Bulk Size Ab03080-10.0-BT

This chimeric human antibody was made using the variable domain sequences of the original Mouse IgG2b format for improved compatibility with existing reagents assays and techniques.

Isotype and Format: Human IgG1, Kappa
Clone Number: C7
Alternative Name(s) of Target: LDLR; Low-density lipoprotein receptor; IgG-C7
UniProt Accession Number of Target Protein: P01130
Published Application(s): inhibition, IP, WB, FC, IF
Published Species Reactivity: Bovine, Human
Immunogen: The original antibody was produced by immunization of BALB/C mice with the extra cellular domain of the bovine LDL-R.
Specificity: The antibody recognizes the ligand binding domain. It binds to the bovine LDL-R, the human LDL-R but it does not cross react with the LDL-Rs of rat, mouse, Chinese hamster, rabbit and dog. The LDL receptor is a cell surface protein that binds LDL, the major cholesterol-transport protein in plasma, and mediates its endocytosis.
Application Notes: The antibody (IgG2b) was employed for the staining of the LDL receptor in normal fibroblast. The antibody competed with LDL for binding to the LDL receptor of intact fibroblast; complete inhibition was achieved at 37 C but not at 4 C (Beisiegel et al., 1981; PMID: 6271765). The antibody detected LDL receptor from human fibroblasts and bovine adrenal cortex by western blot analysis (Beisiegel et al., 1982; PMID: 6290495). The LDL receptor was immunoprecipitated using this antibody (Davis et al., 1987; PMID: 3494949). This antibody was used for detection of LDL receptor expressed on Chang and CHO cells by flow cytometry (Holst et al., 2001; PMID: 11781697) (Ranheim et al., 2006; PMID: 16740646). Immunofluorescence was performed on liver Chang cells using this antibody, showing that the WT protein was localised on the cell surface whereas the two mutant proteins were localised intracellularly (Holst et al., 2001; PMID: 11781697). The antibody was used to inhibit the binding of LDL to its receptor LDLR in brain capillary endothelial cells. Coincubations of LDL with increasing concentrations of the antibody decreased the rate of passage of the LDL through the monolayer; LDL transcytosis was totally abolished at the concentration of 1 mg/ml of antibody. This confirmed that the LDL receptor is involved receptor-mediated transcytosis (Dehouck et al., 1997; PMID: 9265653).
Antibody First Published in: Beisiegel et al. Monoclonal Antibodies to the Low Density Lipoprotein Receptor as Probes for Study of Receptor-mediated Endocytosis and the Genetics of Familial

Hypercholesterolemia J Biol Chem. 1981 Nov 25;256(22):11923-31. PMID:6271765
Note on publication: The paper describes the generation and characterization of the antibody. The antibody was used as a probe for the study of the cellular and genetic factors involved in receptor-mediated endocytosis.

Product Form

Size: 1 mg Purified antibody in bulk size.
Purification: Protein A affinity purified
Supplied In: PBS only.
Storage Recommendation: Store at 4^{o}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^{o}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.