Monoclonal Anti-human CD48 Antibody

ORDERING INFORMATION

Catalog Number: MAB3644

Clone: 394607

Lot Number: ZEP01

Size: 100 μg

Formulation: 0.2 μm filtered solution in PBS with 5% trehalose

Storage: -20° C

Reconstitution: sterile PBS

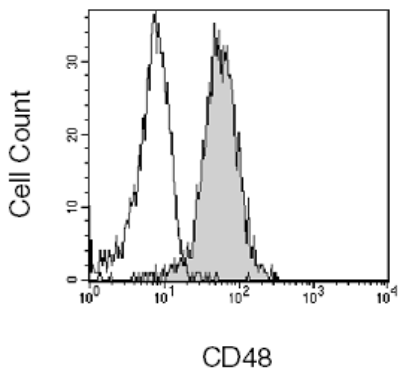
Specificity: human CD48

Immunogen: NS0-derived rhCD48

Ig class: mouse IgG_{2B}

Recommended Applications:
Western blot
Flow cytometry

Other Application:
Direct ELISA



Human blood-derived monocytes were stained with anti-CD48 (R&D Systems, Cat. # MAB3644, filled histogram) or isotype control antibody (R&D Systems, Cat. # MAB0041, open histogram), followed by PE-conjugated anti-mouse antibody (R&D Systems, Cat. # F0102B).

Background
CD48, also known as BLAST-1, OX45, and BCM1, is a GPI-linked member of the CD2 subfamily of immunoglobulin superfamily proteins. CD48 is expressed on lymphocytes, monocytes, granulocytes, and mast cells. It functions as a co-stimulatory and adhesion molecule that binds CD2, CD229, and 2B4. CD48 also mediates bacterial phagocytosis by mast cells. Human CD48 shares approximately 50% amino acid sequence identity with mouse and rat CD48, respectively.

Preparation
This antibody was produced from a hybridoma resulting from the fusion of a mouse myeloma with B cells obtained from a mouse immunized with purified, NS0-derived, recombinant human CD48 (rhCD48; aa 27 - 220; Accession # NP_001769). The IgG fraction of the tissue culture supernatant was purified by Protein G affinity chromatography.

Formulation
Lyophilized from a 0.2 μm filtered solution in phosphate-buffered saline (PBS) with 5% trehalose.

Reconstitution
Reconstitute with sterile PBS. If 0.2 mL of PBS is used, the antibody concentration will be 500 μg/mL.

Storage
Lyophilized samples are stable for twelve months from date of receipt when stored at -20° C to -70° C. Upon reconstitution, the antibody can be stored at 2° - 8° C for 1 month without detectable loss of activity. Reconstituted antibody can also be aliquotted and stored frozen at -20° C to -70° C **in a manual defrost freezer** for six months without detectable loss of activity. **Avoid repeated freeze-thaw cycles.**

Specificity
This antibody detects rhCD48 in direct ELISAs and Western blots. In these applications, this antibody shows no cross-reactivity with rmCD48 or rhOX40.

Applications
Western Blot - This antibody can be used at 1 - 2 μg/mL with the appropriate secondary reagents to detect human CD48. Using a colorimetric detection system, the detection limit for rhCD48 is approximately 5 ng/lane under non-reducing conditions. Use of this antibody under reducing conditions is not recommended. Chemiluminescent detection with WesternGlo™ Chemiluminescent Detection Substrate (R&D Systems, Catalog # AR004) will increase sensitivity by 5 to 50 fold. In this application, the use of anti-human CD48 monoclonal antibody, R&D Systems Catalog # MAB36441 is recommended.

Flow Cytometry - This antibody was validated for flow cytometry using blood-derived monocytes. Dilute this antibody to 25 μg/mL and add 10 μL of the diluted solution to 1 - 2.5 x 10^5 cells in a total reaction volume not exceeding 200 μL. The binding of unlabeled monoclonal antibodies may be visualized by adding a secondary developing reagent such as goat anti-mouse IgG conjugated to a fluorochrome.

Direct ELISA - This antibody can be used at 0.5 - 1.0 μg/mL with the appropriate secondary reagents to detect human CD48. The detection limit for rhCD48 is approximately 10 ng/well.

Optimal dilutions should be determined by each laboratory for each application.

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