



Monoclonal Anti-mouse SCD-1 Antibody

ORDERING INFORMATION

Catalog Number: MAB4404

Clone: 428208

Lot Number: ZOS01

Size: 100 µg

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

Storage: -20° C

Reconstitution: sterile PBS

Specificity: mouse SCD-1

Immunogen: Sf 21-derived rmSCD-1

Ig class: rat IgG_{2A}

Recommended Application:
Western blot

Other Application:
Direct ELISA

Background

Stearoyl-CoA Desaturase 1 (SCD-1) is a four-transmembrane endoplasmic reticulum protein that is a rate-limiting enzyme in the formation of triglycerides, cholesteryl esters and phospholipids from saturated fatty acids. Its expression in adipose and liver is enhanced by insulin and certain dietary sugars and fats, and downregulated by TNF- α . SCD-1 is one of four iron-containing murine stearoyl-CoA desaturases that share 79 - 88% aa identity. The 355 aa, predicted 41 kDa mouse SCD-1 shares 92% and 84% aa identity with rat and human SCD-1, respectively.

Preparation

This antibody was produced from a hybridoma resulting from the fusion of a mouse myeloma with B cells obtained from a rat immunized with purified, Sf 21-derived, recombinant mouse SCD-1 (rmSCD-1; aa 2 - 355; Accession # P13516). 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 1 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 rmSCD-1 in direct ELISAs and Western blots.

Applications

Western blot - This antibody can be used at 1 - 2 µg/mL with the appropriate secondary reagents to detect mouse SCD-1. Using a colorimetric detection system, the detection limit for rmSCD-1 is approximately 25 ng/lane under non-reducing and reducing conditions. Chemiluminescent detection will increase sensitivity by 5 to 50 fold.

Direct ELISA - This antibody can be used at 0.5 - 1.0 µg/mL with the appropriate secondary reagents to detect mouse SCD-1. The detection limit for rmSCD-1 is approximately 2 ng/well.

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