

SCD1(M38) Antibody

✓ 100 µl
(10 Western mini-blot)

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rev. 10/22/08

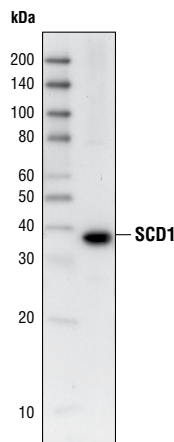
This product is for *in vitro* research use only and is not intended for use in humans or animals.
This product is not intended for use as a therapeutic or in diagnostic procedures.

Applications	Species Cross-Reactivity*	Molecular Wt.	Source
W, IF-IC Endogenous	M, (H)	37 kDa	Rabbit**

Background: Stearoyl-CoA desaturase 1 (SCD1), a key lipogenic enzyme in the endoplasmic reticulum, catalyzes the conversion of palmitoyl-CoA and stearoyl-CoA to palmitoleoyl-CoA (16:1) and oleoyl-CoA (18:1) (1,2,3). Palmitoleate and oleate are the major components of triglycerides, membrane phospholipids and cholesterol esters (1). The SCD1-knockout mice show improved insulin sensitivity and reduced body fat (1). Disruption of SCD1 in mouse brown adipose tissue strengthens insulin signaling, resulting in the increased translocation of Glut4 to plasma membrane and therefore enhanced uptake of glucose into brown adipocytes (4). Furthermore, SCD1 was shown to be essential for the onset of diet-induced body weight gain (1) and insulin resistance in liver (5).

Specificity/Sensitivity: SCD1 (M38) Antibody detects endogenous levels of total SCD1 protein.

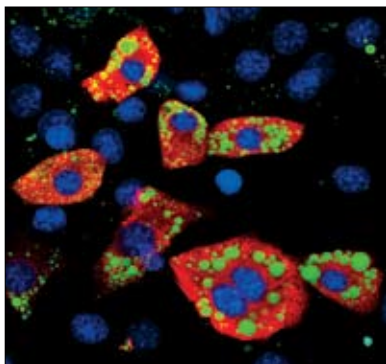
Source/Purification: Polyclonal antibodies are produced by immunizing animals with a synthetic peptide (KLH-coupled) derived from the sequence around M38 of human SCD1. Antibodies are purified by protein A and peptide affinity chromatography.



Western blot analysis of 3T3-L1 cell lysates, using SCD1 (M38) Antibody.

Background References:

- (1) Ntambi, J.M. et al. (2002) *Proc. Natl. Acad. Sci. USA* 99, 11482–11486.
- (2) Kato, H. et al. (2006) *J. Cell. Sci.* 119, 2342–2353.
- (3) Ozols, J. (1997) *Mol. Biol. Cell* 8, 2281–2290.
- (4) Rahman, S.M. et al. (2005) *Am. J. Physiol. Endocrinol. Metab.* 288, E381–387.
- (5) Gutiérrez-Juárez, R. et al. (2006) *J. Clin. Invest.* 116, 1686–1695.



Confocal immunofluorescent analysis of 3T3-L1 cells, using SCD1 (M38) Antibody (red) showing cytoplasmic localization in differentiated cells. Lipid droplets have been labeled with BODIPY 493/503 (green). Blue pseudocolor = DRAQ5™ (fluorescent DNA dye).

IMPORTANT: For Western blots, incubate membrane with diluted antibody in 5% w/v BSA, 1X TBS, 0.1% Tween-20 at 4°C with gentle shaking, overnight.

Entrez-Gene ID #6319
Swiss-Prot Acc. #O00767

Storage: Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA and 50% glycerol. Store at -20°C.

Do not aliquot the antibody.

*Species cross-reactivity is determined by Western blot.

**Anti-rabbit secondary antibodies must be used to detect this antibody.

Recommended Antibody Dilutions:
Western blotting 1:1000
Immunofluorescence (IF-IC) 1:50

For application specific protocols please see the web page for this product at www.cellsignal.com.

Companion Products:

- SCD1 (R347) Antibody #2283
 - Fatty Acid Synthase Antibody #3189
 - ATGL Antibody #2138
 - Phospho-HSL (Ser563) Antibody #4139
 - Phospho-HSL (Ser565) Antibody #4137
 - Phospho-HSL (Ser660) Antibody #4126
 - Phototope®-HRP Western Blot Detection System, Anti-rabbit IgG, HRP-linked Antibody #7071
 - Anti-rabbit IgG, HRP-linked Antibody #7074
 - Prestained Protein Marker, Broad Range (Premixed Format) #7720
 - Biotinylated Protein Ladder Detection Pack #7727
 - 20X LumiGLO® Reagent and 20X Peroxide #7003
- Please visit www.cellsignal.com for a complete listing of recommended companion products.