#2283 Store at –20°C

SCD1 (R347) Antibody

✓ 100 µl
(10 western blots)

Cell Signaling TECHNOLOGY®

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This product is intended for research purposes only. This product is not intended to be used for therapeutic or diagnostic purposes in humans or animals.

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

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 (R347) Antibody detects endogenous levels of total SCD1 protein.

Source/Purification: Polyclonal antibodies are produced by immunizing animals with a synthetic peptide corresponding to residues surrounding R347 of human SCD1. Antibodies are purified by protein A and peptide affinity chromatography.

Background References:

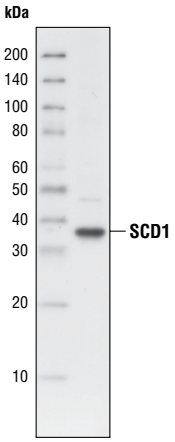
(1) Ntambi, J.M. et al. (2002) *Proc. Natl. Acad. Sci. USA* 99, 11482–114866.

(2) Kato, H. et al. (2006) *J. Cell. Sci.* 119, 2342-2353.

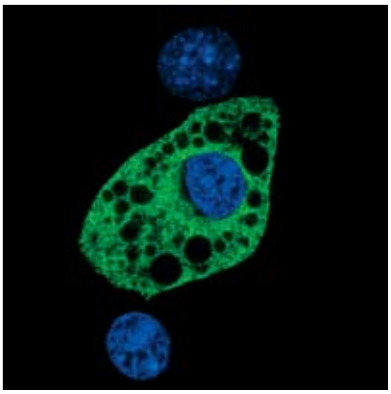
(3) Ozols, J. (1997) *Mol. Biol. Cell* 8, 2281–2290.

(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.



Western blot analysis of 3T3-L1 cell lysates, using SCD1 (R347) Antibody.



Confocal immunofluorescent analysis of 3T3-L1 cells labeled with SCD1 (R347) Antibody (green) showing cytoplasmic localization in differentiated cells. Blue pseudocolor = DRAQ5® #4084 (fluorescent DNA dye).

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)	1:25

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

Please visit www.cellsignal.com for a complete listing of recommended companion products.

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.

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Applications Key: **W**—Western **IP**—Immunoprecipitation **IHC**—Immunohistochemistry **ChIP**—Chromatin Immunoprecipitation **IF**—Immunofluorescence **F**—Flow cytometry **E-P**—ELISA-Peptide

Species Cross-Reactivity Key: **H**—human **M**—mouse **R**—rat **Hm**—hamster **Mk**—monkey **Mi**—mink **C**—chicken **Dm**—D. melanogaster **X**—Xenopus **Z**—zebrafish **B**—bovine **Dg**—dog **Pg**—pig **Sc**—S. cerevisiae **Ce**—C. elegans **Hr**—horse **All**—all species expected Species enclosed in parentheses are predicted to react based on 100% homology.

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