

SCD1 (R347) Antibody

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Applications:	Reactivity:	Sensitivity:	MW (kDa):	Source/Isotype:	UniProt ID:	Entrez-Gene Id:
W, IF-IC	H M	Endogenous	37	Rabbit	#O00767	6319

Product Usage Information**Application**

Western Blotting
Immunofluorescence (Immunocytochemistry)

Dilution

1:1000
1:50

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.

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

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

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.

Species Reactivity

Species reactivity is determined by testing in at least one approved application (e.g., western blot).

Western Blot Buffer

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

Applications Key

W: Western Blotting **IF-IC:** Immunofluorescence (Immunocytochemistry)

Cross-Reactivity Key

H: Human **M:** Mouse

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