



Orders: 877-616-CELL (2355)
orders@cellsignal.com

Support: 877-678-TECH (8324)

Web: info@cellsignal.com
cellsignal.com

3 Trask Lane | Danvers | Massachusetts | 01923 | USA

Store at -20C
#2794

SCD1 (C12H5) Rabbit mAb

For Research Use Only. Not for Use in Diagnostic Procedures.

Applications: W, IP, IHC-P, IF-F, IF-IC	Reactivity: H M	Sensitivity: Endogenous	MW (kDa): 37	Source/Isotype: Rabbit IgG	UniProt ID: #O00767	Entrez-Gene Id: 6319
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Product Usage Information

Application

Western Blotting
Immunoprecipitation
Immunohistochemistry (Paraffin)
Immunofluorescence (Frozen)
Immunofluorescence (Immunocytochemistry)

Dilution

1:1000
1:50
1:100 - 1:400
1:100
1:100 - 1:200

Storage

Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA, 50% glycerol and less than 0.02% sodium azide. Store at -20°C. Do not aliquot the antibody.

For a carrier free (BSA and azide free) version of this product see product #38672.

Specificity/Sensitivity

SCD1 (C12H5) Rabbit mAb detects endogenous levels of total SCD1 protein. Species cross-reactivity for IHC-P is mouse only.

Source / Purification

Monoclonal antibody is produced by immunizing animals with a synthetic peptide corresponding to residues surrounding Leu35 of mouse SCD1.

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, 11482-114866.
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.

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 **IP:** Immunoprecipitation **IHC-P:** Immunohistochemistry (Paraffin) **IF-F:** Immunofluorescence (Frozen) **IF-IC:** Immunofluorescence (Immunocytochemistry)

Cross-Reactivity Key

H: Human **M:** Mouse

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