Revision 5

Store at -20C

#2794

SCD1 (C12H5) Rabbit mAb

Cell Signaling TECHNOLOGY®

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

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

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

Product Usage Information

Application	Dilution
Western Blotting	1:1000
Immunoprecipitation	1:50
Immunohistochemistry (Paraffin)	1:100 - 1:400
Immunofluorescence (Frozen)	1:100
Immunofluorescence (Immunocytochemistry)	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.

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

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

Cross-Reactivity Key

H: human **M:** mouse **R:** rat **Hm:** hamster **Mk:** monkey **Vir:** virus **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
GP: Guinea Pig **Rab:** rabbit **All:** all species expected

Trademarks and Patents

Limited Uses

Except as otherwise expressly agreed in a writing signed by a legally authorized representative of CST, the following terms apply to Products provided by CST, its affiliates or its distributors. Any Customer's terms and conditions that are in addition to, or different from, those contained herein, unless separately accepted in writing by a legally authorized representative of CST, are rejected and are of no force or effect.

Products are labeled with For Research Use Only or a similar labeling statement and have not been approved, cleared, or licensed by the FDA or other regulatory foreign or domestic entity, for any purpose. Customer shall not use any Product for any diagnostic or therapeutic purpose, or otherwise in any manner that conflicts with its labeling statement. Products sold or licensed by CST are provided for Customer as the end-user and solely for research and development uses. Any use of Product for diagnostic, prophylactic or therapeutic purposes, or any purchase of Product for resale (alone or as a component) or other commercial purpose, requires a separate license from CST. Customer shall (a) not sell, license, loan, donate or otherwise transfer or make available any Product to any third party, whether alone or in combination with other materials, or use the Products to manufacture any commercial products, (b) not copy, modify, reverse engineer, decompile, disassemble or otherwise attempt to discover the underlying structure or technology of the Products, or use the Products for the purpose of developing any products or services that would compete with CST products or services, (c) not alter or remove from the Products any trademarks, trade names, logos, patent or copyright notices or markings, (d) use the Products solely in accordance with CST Product Terms of Sale and any applicable documentation, and (e) comply with any license, terms of service or similar agreement with respect to any third party products or services used by Customer in connection with the Products.