Revision 1

Store at -20C

#35695

SOAT1 Antibody

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:
W	H	Endogenous	45	Rabbit	#P35610	6646

Product Usage Information

Application	Dilution
Western Blotting	1:1000

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

SOAT1 Antibody recognizes endogenous levels of total SOAT1 protein.

Source / Purification

Polyclonal antibodies are produced by immunizing animals with a synthetic peptide corresponding to residues near the amino terminus of human SOAT1 protein. Antibodies are purified by protein A and peptide affinity chromatography.

Background

SOAT1 (Sterol O-acyltransferase 1; ACAT1) is an O-acyltransferase that functions in the endoplasmic reticulum (ER) to catalyze the formation of cholesterol esters from free cholesterol and long chain fatty acyl-coenzyme A. The cholesterol esters are incorporated into cytoplasmic lipid droplets, thereby preventing excess free cholesterol from inducing lipid-mediated cell toxicity, including ER stress (1). Research studies have shown that pharmacological inhibition of SOAT1 in tumor cells induced lipid-mediated cell toxicity that suppressed tumor cell growth and promoted tumor cell apoptosis (2,3). Pharmacological SOAT1 inhibition was also shown to stimulate autophagy-mediated proteolysis in microglia, leading to enhanced clearance of amyloid peptide Aβ42 (4,5). Collectively, these findings suggest that SOAT1 inhibition may have therapeutic potential in both cancer and Alzheimer's disease.

Background References

1. Rogers, M.A. et al. (2015) *J Steroid Biochem Mol Biol* 151, 102-7.
2. Sbiera, S. et al. (2015) *Endocrinology* 156, 3895-908.
3. Geng, F. et al. (2016) *Clin Cancer Res* 22, 5337-5348.
4. Shibuya, Y. et al. (2014) *J Neurosci* 34, 14484-501.
5. Shibuya, Y. et al. (2015) *Future Med Chem* 7, 2451-67.

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

Cross-Reactivity Key

H: Human

Trademarks and Patents

Limited Uses

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.