Revision 3

Store at -20C

#12252

CPT1A (D3B3) 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:
W, W-S, IP	H	Endogenous	88	Rabbit IgG	#P50416	1374

Product Usage Information

Application	Dilution
Western Blotting	1:1000
Simple Western™	1:10 - 1:50
Immunoprecipitation	1:50

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

CPT1A (D3B3) Rabbit mAb recognizes endogenous levels of total CPT1A protein. CPT1A (D3B3) Rabbit mAb recognizes endogenous levels of total CPT1A protein. This antibody does not cross-react with CPT1B, CPT1C, or CPT2.

Source / Purification

Monoclonal antibody is produced by immunizing animals with a synthetic peptide corresponding to residues surrounding Leu213 of human CPT1A protein.

Background

Carnitine palmitoyltransferase-1 (CPT1), localized to the mitochondrial outer membrane, translocates fatty acids across the mitochondrial membranes and catalyzes the rate-limiting step of β-oxidation (1,2). There are three isoforms of this enzyme: CPT1A (liver), CPT1B (muscle), and CPT1C (brain) (1,2). Deficiency of CPT1A results in an autosomal recessive mitochondrial fatty acid oxidation disorder (3). Studies have shown that physiological high blood glucose and insulin levels inhibit CPT1B activity in human muscle and therefore divert long-chain fatty acids toward storage in human muscle as triglycerides (4). Furthermore, mice deficient in CPT1C show less food intake and reduced body weight (5). These findings suggest that CPT1 may play a role in metabolic syndromes.

Background References

1. Wolfgang, M.J. et al. (2006) *Proc Natl Acad Sci U S A* 103, 7282-7.
2. Bonnefont, J.P. et al. *Mol Aspects Med* 25, 495-520.
3. Ogawa, E. et al. (2002) *J Hum Genet* 47, 342-7.
4. Rasmussen, B.B. et al. (2002) *J Clin Invest* 110, 1687-93.
5. Wolfgang, M.J. and Lane, M.D. (2011) *FEBS J* 278, 552-8.

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 **W-S:** Simple Western™ **IP:** Immunoprecipitation

Cross-Reactivity Key

H: Human

Trademarks and Patents

Limited Uses

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