

PRODUCT INFORMATION



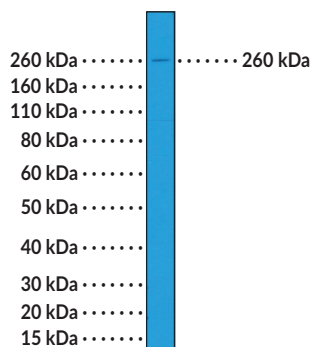
Acetyl-CoA Carboxylase 1 Rabbit Monoclonal Antibody (Clone RM232)

Item No. 32192

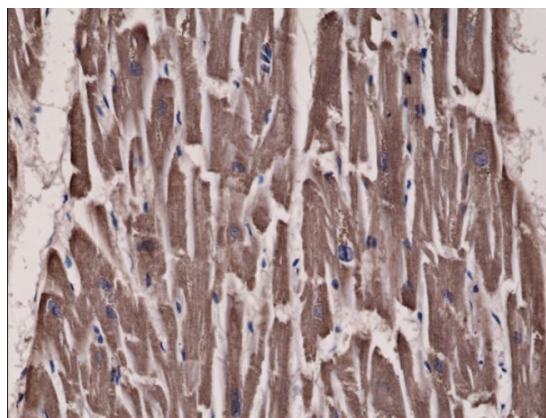
Overview and Properties

Contents:	This vial contains 100 µl of protein A-affinity purified monoclonal antibody.
Synonyms:	ACC1, ACCα
Immunogen:	Peptide corresponding to human acetyl-CoA carboxylase 1
Cross Reactivity:	(+) Acetyl-CoA carboxylase 1
Species Reactivity:	(+) Human
Form:	Liquid
Storage:	-20°C (as supplied)
Stability:	≥1 year
Storage Buffer:	PBS, with 50% glycerol, 1% BSA, and 0.09% sodium azide
Clone:	RM232
Host:	Rabbit
Isotype:	IgG
Applications:	Immunohistochemistry (IHC) and Western blot (WB); the recommended starting dilution for IHC is 1:300-1:500 and 1:1,000-1:2,000 for WB. Other applications were not tested, therefore optimal working concentration/dilution should be determined empirically.

Images



WB of A431 cell lysates using Acetyl-CoA Carboxylase 1 Rabbit Monoclonal Antibody (Clone RM232) at a 1:1,000 dilution.



Immunohistochemical staining of formalin-fixed, paraffin-embedded (FFPE) human heart tissue sections using Acetyl-CoA Carboxylase 1 Rabbit Monoclonal Antibody (Clone RM232) at a 1:300 dilution.

WARNING
THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA
This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

WARRANTY AND LIMITATION OF REMEDY
Buyer agrees to purchase the material subject to Cayman's Terms and Conditions. Complete Terms and Conditions including Warranty and Limitation of Liability information can be found on our website.

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Description

Acetyl-CoA carboxylase 1 (ACC1) is a biotin-dependent enzyme that catalyzes the conversion of acetyl-CoA (Item No. 16160) to malonyl-CoA (Item No. 16455), a building block in the biosynthesis of long-chain fatty acids.¹⁻³ It is found at high levels in the liver and adipose tissue and is localized to the cytosol.³ Expression of ACC1 is increased by sterol regulatory element binding protein-1a (SREBP-1a) and SREBP-1c, which are induced by insulin, as well as the lipid precursors inositol and choline (Item No. 31178).¹ ACC1 activity is increased by citrate and inhibited by binding to long-chain acyl-CoAs or by phosphorylation by a number of kinases, including AMPK and TAK1.^{1,3,4} ACC1 has critical roles in fatty acid synthesis and regulation of insulin levels.³ It is involved in numerous pathological conditions, including metabolic diseases such as diabetes and non-alcoholic fatty liver disease (NAFLD), as well as cancer and bacterial infections.² Cayman's Acetyl-CoA Carboxylase 1 Rabbit Monoclonal Antibody (Clone RM232) can be used for immunohistochemistry (IHC) and Western blot (WB) applications.

References

1. Tong, L. Acetyl-coenzyme A carboxylase: Crucial metabolic enzyme and attractive target for drug discovery. *Cell. Mol. Life Sci.* **62(16)**, 1784-1803 (2005).
2. Wu, X. and Huang, T. Recent development in acetyl-CoA carboxylase inhibitors and their potential as novel drugs. *Future Med. Chem.* **12(6)**, 533-561 (2020).
3. Chen, L., Duan, Y., Wei, H., *et al.* Acetyl-CoA carboxylase (ACC) as a therapeutic target for metabolic syndrome and recent developments in ACC1/2 inhibitors. *Expert Opin. Investig. Drugs* **28(10)**, 917-930 (2019).
4. Rios Garcia, M., Steinbauer, B., Srivastava, K., *et al.* Acetyl-CoA carboxylase 1-dependent protein acetylation controls breast cancer metastasis and recurrence. *Cell Metab.* **26(6)**, 842-855 (2017).