SANTA CRUZ BIOTECHNOLOGY, INC.

apoB (H-15): sc-12332

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Post-transcriptional editing of apolipoprotein B (apoB) mRNA is regulated by APOBEC1 (also designated human (or rat) small intestinal apolipoprotein B mRNA editing protein, HEPR, or REPR) in hepatic cells to achieve a steady state proportion of edited and unedited RNA molecules. Two forms of apoB are known to circulate in the plasma of mammals. apoB-100 is a protein primarily synthesized in the liver as a structural component of very-low-density lipoprotein particles. A truncated form of apoB-100, apoB-48, is synthesized in the small intestine and contains the amino-terminal 2,152 amino acids of the larger protein. This organ-specific partitioning of apoB production is the result of RNA editing of a common apoB gene.

REFERENCES

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2. Law, S.W., et al. 1986. Human liver apolipoprotein B-100 cDNA: complete nucleic acid and derived amino acid sequence. Proc. Natl. Acad. Sci. USA 83: 8142-8146.
3. Young, S.G., et al. 1986. Two new monoclonal antibody-based enzyme-linked assays of apolipoprotein B. Clin. Chem. 32: 1484-1490.
4. Micic, S., et al. 1989. A-I and B in blood spotted on filter paper. Clin. Chem. 34: 2452-2455.
5. Young, S.G. 1990. Recent progress in understanding apolipoprotein B. Circulation 82: 1574-1594.
6. Anant, S., et al. 2000. An AU-rich sequence element (UUUN[A/U]U) downstream of the edited C in apolipoprotein B mRNA is a high-affinity binding site for Apobec-1: binding of Apobec-1 to this motif in the 3' untranslated region of c-Myc increases mRNA stability. Mol. Cell. Biol. 20: 1982-1992.
7. Yang, Y., et al. 2000. Induction of cytidine to uridine editing on cytoplasmic apolipoprotein B mRNA by overexpressing Apobec-1. J. Biol. Chem. 275: 22663-22669.
8. Chen, Z., et al. 2007. ApoB mRNA editing is mediated by a coordinated modulation of multiple apoB mRNA editing enzyme components. Am. J. Physiol. Gastrointest. Liver Physiol. 292: G53-G65.
9. Kurzawski, M., et al. 2007. Apolipoprotein B (apoB) gene polymorphism in patients with gallbladder disease. Arch. Med. Res. 38: 360-363.

CHROMOSOMAL LOCATION

Genetic locus: Apob (mouse) mapping to 12 A1.1.

SOURCE

apoB (H-15) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of apoB of mouse origin.

STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-12332 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

apoB (H-15) is recommended for detection of apoB-100 of mouse and rat origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

apoB (H-15) is also recommended for detection of apoB-100 in additional species, including bovine.

Suitable for use as control antibody for apoB siRNA (m): sc-41181, apoB shRNA Plasmid (m): sc-41181-SH and apoB shRNA (m) Lentiviral Particles: sc-41181-V.

Molecular Weight of apoB: 512 kDa.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

SELECT PRODUCT CITATIONS

1. Uchiyama, S., et al. 2006. CuZn-SOD deficiency causes ApoB degradation and induces hepatic lipid accumulation by impaired lipoprotein secretion in mice. J. Biol. Chem. 281: 31713-31719.
2. Lee, J.H., et al. 2010. A novel role for the dioxin receptor in fatty acid metabolism and hepatic steatosis. Gastroenterology 139: 653-663.
3. Karasawa, T., et al. 2011. Sterol regulatory element-binding protein-1 determines plasma remnant lipoproteins and accelerates atherosclerosis in low-density lipoprotein receptor-deficient mice. Arterioscler. Thromb. Vasc. Biol. 31: 1788-1795.

RESEARCH USE

For research use only, not for use in diagnostic procedures.

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.