

apoA-V (C-12): sc-33081

BACKGROUND

Lipids, such as phospholipids, triacylglycerols and cholesterol, are weakly soluble in aqueous solution and therefore are transported by circulation as components of lipoproteins. Lipoproteins are globular particles that consist of a non-polar core of triacylglycerols and cholesterol esters surrounded by phospholipid, cholesterol and an amphiphilic coating of protein, known as apolipoproteins (apo). These complexes allow the dissolution and shuttling of their non-polar lipid components. At least nine different apolipoproteins are distributed in significant amounts in different human lipoproteins. ApoA-V, also designated apolipoprotein A-V, apolipoprotein A5 or ALP-AV, is associated with chylomicrons. ApoA-V stimulates LPL (apo-CII lipoprotein lipase) triglyceride hydrolysis and inhibits VLDL-triglyceride production, which makes the protein important in determining plasma triglyceride levels. ApoA-V is a secreted liver protein that is induced in early liver regeneration.

REFERENCES

1. Pennacchio, L.A., et al. 2002. Two independent apoA-V haplotypes influence human plasma triglyceride levels. *Hum. Mol. Genet.* 11: 3031-3038.
2. Kao, J.T., et al., 2003. A novel genetic variant in the apoA-V gene is associated with hypertriglyceridemia. *Hum. Mol. Genet.* 12: 2533-2539.
3. Weinberg, R.B., et al. 2003. Structure and interfacial properties of human apoA-V. *J. Biol. Chem.* 278: 34438-34444.
4. Beckstead, J.A., et al. 2003. Structure-function studies of human apoA-V: a regulator of plasma lipid homeostasis. *Biochemistry* 42: 9416-9423.
5. Vrablik, M., et al. 2003. Ser19 → Trp polymorphism within the apoA-V gene in hypertriglyceridaemic people. *J. Med. Genet.* 40: e105.
6. O'Brien, P.J., et al. 2005. The novel apoA-V is present in human serum, is associated with VLDL, HDL, and chylomicrons, and circulates at very low concentrations compared with other apolipoproteins. *Clin. Chem.* 51: 351-359.

CHROMOSOMAL LOCATION

Genetic locus: APOA5 (human) mapping to 11q23.3; ApoA5 (mouse) mapping to 9 A5.2.

SOURCE

apoA-V (C-12) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the C-terminus of apoA-V of human origin.

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-33081 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

STORAGE

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

APPLICATIONS

apoA-V (C-12) is recommended for detection of apoA-V of mouse, rat and human 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).

Suitable for use as control antibody for apoA-V siRNA (h): sc-44527, apoA-V siRNA (m): sc-44869, apoA-V shRNA Plasmid (h): sc-44527-SH, apoA-V shRNA Plasmid (m): sc-44869-SH, apoA-V shRNA (h) Lentiviral Particles: sc-44527-V and apoA-V shRNA (m) Lentiviral Particles: sc-44869-V.

Molecular Weight of apoA-V: 41 kDa.

Positive Controls: human sera extract, Y79 cell lysate: sc-2240 or HeLa whole cell lysate: sc-2200.

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.

RESEARCH USE

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

PROTOCOLS

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

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Try **apoA-V (A-12): sc-393722** or **apoA-V (E-12): sc-373950**, our highly recommended monoclonal alternatives to apoA-V (C-12).