



## apoO (D-14): sc-131099

### BACKGROUND

Apolipoproteins are a family of fatty-acid binding proteins that transport fat through the bloodstream in the form of lipoproteins. ApoO (apolipoprotein O), also known as FAM121B or MyO25, is a 198 amino acid single-pass membrane protein that belongs to the apolipoprotein family. Expressed ubiquitously with particularly high expression in diabetic heart tissue, apoO functions to promote the transport of cholesterol from macrophage cells and may be involved in regulatory mechanisms that protect lipid accumulation within the heart. ApoO is present in high density lipoproteins (HDLs) and low density lipoproteins (LDLs) and is secreted by an MTP (microsomal triglyceride transfer protein)-dependent mechanism. Two isoforms of apoO exist due to alternative splicing events.

### REFERENCES

1. Bjorkegren, J., et al. 2001. Lipoprotein secretion and triglyceride stores in the heart. *J. Biol. Chem.* 276: 38511-38517.
2. van der Vliet, H.N., et al. 2001. Apolipoprotein A-V: a novel apolipoprotein associated with an early phase of liver regeneration. *J. Biol. Chem.* 276: 44512-44520.
3. Offer, T. and Samuni, A. 2002. Nitroxides inhibit peroxy radical-mediated DNA scission and enzyme inactivation. *Free Radic. Biol. Med.* 32: 872-881.
4. Nielsen, L.B. 2002. Lipoprotein production by the heart: a novel pathway of triglyceride export from cardiomyocytes. *Scand. J. Clin. Lab. Invest. Suppl.* 237: 35-40.
5. Clark, H.F., et al. 2003. The secreted protein discovery initiative (SPDI), a large-scale effort to identify novel human secreted and transmembrane proteins: a bioinformatics assessment. *Genome Res.* 13: 2265-2270.
6. Lamant, M., et al. 2006. ApoO, a novel apolipoprotein, is an original glycoprotein up-regulated by diabetes in human heart. *J. Biol. Chem.* 281: 36289-36302.
7. Kassab, A., et al. 2008. Homocysteine enhances LDL fatty acid peroxidation, promoting microalbuminuria in type 2 diabetes. *Ann. Clin. Biochem.* 45: 476-480.

### CHROMOSOMAL LOCATION

Genetic locus: APOO (human) mapping to Xp22.11; Apoo (mouse) mapping to X C3.

### SOURCE

apoO (D-14) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of apoO of human origin.

### STORAGE

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

### RESEARCH USE

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

### 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-131099 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

### APPLICATIONS

apoO (D-14) is recommended for detection of apoO isoforms 1 and 2 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 apoO siRNA (h): sc-90923, apoO siRNA (m): sc-141175, apoO shRNA Plasmid (h): sc-90923-SH, apoO shRNA Plasmid (m): sc-141175-SH, apoO shRNA (h) Lentiviral Particles: sc-90923-V and apoO shRNA (m) Lentiviral Particles: sc-141175-V.

Molecular Weight of translated apoO: 22 kDa.

Molecular Weight of glycosylated apoO: 55 kDa.

Positive Controls: Hep G2 cell lysate: sc-2227.

### 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.

### PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) or our catalog for detailed protocols and support products.