

Endothelial Lipase (K-19): sc-46938

BACKGROUND

The Lipase gene family belongs to one of the most robust genetic superfamilies found in living organisms, which includes esterases and thioesterases. Members of the AB hydrolase subfamily include hepatic lipase (HL), endothelial lipase (EDL or EL), lipoprotein lipase (LPL), pancreatic lipase (PL), gastric lipase (GL) and LCAT. These family members play a crucial role in the metabolism of lipids. Defects in LPL may cause chylomicronemia syndrome or a form of lipoprotein lipase deficiency characterized by hypertriglyceridemia. Endothelial lipase, which also is known as endothelial cell-derived lipase, has both triglyceride and phospholipase activity. This protein, which is synthesized in endothelial cells, can bind heparin. It is expressed primarily in placenta, liver, thyroid, kidney, lung, testis and ovary tissue.

REFERENCES

- Jaye, M., Lynch, K.J., Krawiec, J., Marchadier, D., Maugeais, C., Doan, K., South, V., Amin, D., Perrone, M. and Rader, D.J. 1999. A novel endothelial-derived lipase that modulates HDL metabolism. *Nat. Genet.* 21: 424-428.
- McCoy, M.G., Sun, G.S., Marchadier, D., Maugeais, C., Glick, J.M. and Rader, D.J. 2002. Characterization of the lipolytic activity of endothelial lipase. *J. Lipid Res.* 43: 921-929.
- Kojima, Y., Hirata, K., Ishida, T., Shimokawa, Y., Inoue, N., Kawashima, S., Quertermous, T. and Yokoyama, M. 2004. Endothelial lipase modulates monocyte adhesion to the vessel wall. A potential role in inflammation. *J. Biol. Chem.* 279:54032-54038.
- Gauster, M., Hrzenjak, A., Schick, K. and Frank, S. 2005. Endothelial lipase is inactivated upon cleavage by the members of the proprotein convertase family. *J. Lipid Res.* 46: 977-987.
- Gauster, M., Rechberger, G., Sovic, A., Hoerl, G., Steyrer, E., Sattler, W. and Frank, S. 2005. Endothelial lipase releases saturated and unsaturated fatty acids of high density lipoprotein phosphatidylcholine. *J. Lipid Res.* 46: 1517-1525
- Kratky, D., Zimmermann, R., Wagner, E.M., Strauss, J.G., Jin, W., Kostner, G.M., Haemmerle, G., Rader, D.J. and Zechner R. 2005. Endothelial lipase provides an alternative pathway for FFA uptake in lipoprotein lipase-deficient mouse adipose tissue. *J. Clin. Invest.* 115: 161-167.
- Liu, T., Qian, W.J., Gritsenko, M.A., Camp, D.G., Monroe, M.E., Moore, R.J. and Smith, R.D. 2005. Human plasma N-glycoproteome analysis by immunofluorescence subtraction, hydrazide chemistry and mass spectrometry. *J. Proteome. Res.* 4: 2070-2080.

CHROMOSOMAL LOCATION

Genetic locus: LIPG (human) mapping to 18q21.1; Lipg (mouse) mapping to 18 E2.

SOURCE

Endothelial Lipase (K-19) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of mature Endothelial Lipase and Endothelial Lipase precursor 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-46938 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

Endothelial Lipase (K-19) is recommended for detection of Endothelial Lipase 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); may cross-react with Pancreatic and Lipoprotein Lipases.

Endothelial Lipase (K-19) is also recommended for detection of Endothelial Lipase in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for Endothelial Lipase siRNA (h): sc-60581, Endothelial Lipase siRNA (m): sc-60582, Endothelial Lipase shRNA Plasmid (h): sc-60581-SH, Endothelial Lipase shRNA Plasmid (m): sc-60582-SH, Endothelial Lipase shRNA (h) Lentiviral Particles: sc-60581-V and Endothelial Lipase shRNA (m) Lentiviral Particles: sc-60582-V.

Molecular Weight of Endothelial Lipase: 55 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.

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.

PROTOCOLS

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



Try **Endothelial Lipase (4A9): sc-517036**, our highly recommended monoclonal alternative to Endothelial Lipase (K-19).