

CEL (h): 293T Lysate: sc-115618

BACKGROUND

Carboxyl ester lipase (CEL), previously named cholesterol esterase or bile salt-stimulated lipase, hydrolyzes cholesteryl esters, phospholipids, lyso-phospholipids ceramide and tri-, di- and mono-acylglycerols. CEL contains an active site catalytic triad of serine-histidine-aspartate, which is centrally located within the enzyme structure. Production of CEL primarily occurs in the pancreas and lactating mammary gland, but it is also expressed in liver, macrophages and in the vessel wall. CEL has a wide substrate reactivity, and may perform multiple functions in lipid and lipoprotein metabolism and atherosclerosis. CEL also participates in chylomicron assembly and secretion, which is mediated by its cer-amide hydrolytic activity.

REFERENCES

- Colwell, N.S., et al. 1993. Molecular cloning and expression of rabbit pancreatic cholesterol esterase. *Biochim. Biophys. Acta* 1172: 175-180.
- Bengtsson, S.H., et al. 2002. Transcriptional regulation of the human carboxyl ester lipase gene in THP-1 monocytes: an E-box required for activation binds upstream stimulatory factors 1 and 2. *Biochem. J.* 365: 481-488.
- Higuchi, S., et al. 2002. Characterization of a VNTR polymorphism in the coding region of the CEL gene. *J. Hum. Genet.* 47: 213-215.
- Hui, D.Y., et al. 2002. Carboxyl ester lipase: structure-function relationship and physiological role in lipoprotein metabolism and atherosclerosis. *J. Lipid Res.* 43: 2017-2030.
- Kirby, R.J., et al. 2002. Bile salt-stimulated carboxyl ester lipase influences lipoprotein assembly and secretion in intestine: a process mediated via ceramide hydrolysis. *J. Biol. Chem.* 277: 4104-4109.
- Fayard, E., et al. 2003. Liver receptor homolog 1 controls the expression of carboxyl ester lipase. *J. Biol. Chem.* 278: 35725-35731.
- Bengtsson-Ellmark, S.H., et al. 2004. Association between a polymorphism in the carboxyl ester lipase gene and serum cholesterol profile. *Eur. J. Hum. Genet.* 12: 627-632.
- Kodvavala, A., et al. 2005. Carboxyl ester lipase expression in macrophages increases cholesteryl ester accumulation and promotes atherosclerosis. *J. Biol. Chem.* 280: 38592-38598.

CHROMOSOMAL LOCATION

Genetic locus: CEL (human) mapping to 9q34.2.

PRODUCT

CEL (h): 293T Lysate represents a lysate of human CEL transfected 293T cells and is provided as 100 µg protein in 200 µl SDS-PAGE buffer.

STORAGE

Store at -20° C. Repeated freezing and thawing should be minimized. Sample vial should be boiled once prior to use. Non-hazardous. No MSDS required.

APPLICATIONS

CEL (h): 293T Lysate is suitable as a Western Blotting positive control for human reactive CEL antibodies. Recommended use: 10-20 µl per lane.

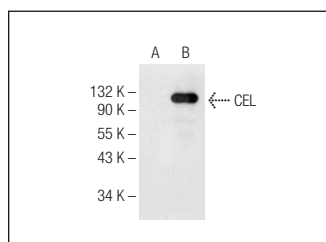
Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

CEL (E-4): sc-377087 is recommended as a positive control antibody for Western Blot analysis of enhanced human CEL expression in CEL transfected 293T cells (starting dilution 1:100, dilution range 1:100-1:1,000).

RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended:
1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048.

DATA



CEL (E-4): sc-377087. Western blot analysis of CEL expression in non-transfected: sc-117752 (A) and human CEL transfected: sc-115618 (B) 293T whole cell lysates.

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.