

# CEL (S-14): sc-34883

## BACKGROUND

Carboxyl ester lipase (CEL), previously named cholesterol esterase or bile salt-stimulated lipase, hydrolyzes cholesteryl esters, tri-, di-, and mono-acylglycerols, phospholipids, lysophospholipids and ceramide. CEL contains an active site catalytic triad of serine-histidine-aspartate, which is centrally located within the enzyme structure. Production of CEL occurs primarily 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. It also participates in chylomicron assembly and secretion, which is mediated by its ceramide hydrolytic activity.

## REFERENCES

1. Colwell, N.S., et al. 1993. Molecular cloning and expression of rabbit pancreatic cholesterol esterase. *Biochim. Biophys. Acta* 1172: 175-180.
2. 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.
3. Higuchi, S., et al. 2002. Characterization of a VNTR polymorphism in the coding region of the CEL gene. *J. Hum. Genet.* 47: 213-215.
4. 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.
5. 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.
6. Fayard, E., et al. 2003. Liver receptor homolog 1 controls the expression of carboxyl ester lipase. *J. Biol. Chem.* 278: 35725-35731.
7. 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.

## CHROMOSOMAL LOCATION

Genetic locus: CEL (human) mapping to 9q34.2; Cel (mouse) mapping to 2 A3.

## SOURCE

CEL (S-14) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of CEL 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-34883 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## RESEARCH USE

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

## APPLICATIONS

CEL (S-14) is recommended for detection of carboxyl ester lipase (CEL) long isoform of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], 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).

CEL (S-14) is also recommended for detection of carboxyl ester lipase (CEL) long isoform in additional species, including equine and canine.

Suitable for use as control antibody for CEL siRNA (h): sc-44447, CEL siRNA (m): sc-44448, CEL shRNA Plasmid (h): sc-44447-SH, CEL shRNA Plasmid (m): sc-44448-SH, CEL shRNA (h) Lentiviral Particles: sc-44447-V and CEL shRNA (m) Lentiviral Particles: sc-44448-V.

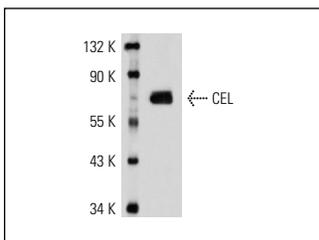
Molecular Weight of CEL: 74 kDa.

Positive Controls: mouse pancreas extract: sc-364244.

## 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) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) 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.

## DATA



CEL (S-14): sc-34883. Western blot analysis of CEL expression in mouse pancreas tissue extract.

## STORAGE

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

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Try **CEL (E-4): sc-377087** or **CEL (D-1): sc-376956**, our highly recommended monoclonal alternatives to CEL (S-14).