

# CEL (D-1): sc-376956

## BACKGROUND

Carboxyl ester lipase (CEL), previously named cholesterol esterase or bile salt-stimulated lipase, hydrolyzes cholesteryl esters, phospholipids, lysophospholipids 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 ceramide 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.
- Kodvawala, 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; Cel (mouse) mapping to 2 A3.

## SOURCE

CEL (D-1) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 439-475 within an internal region of CEL of human origin.

## PRODUCT

Each vial contains 200 µg IgG<sub>1</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-376956 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

## APPLICATIONS

CEL (D-1) is recommended for detection of CEL long isoform of mouse, rat and human origin by Western Blotting (starting dilution 1:100, 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), immunohistochemistry (including paraffin-embedded sections) (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 (D-1) is also recommended for detection of 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.

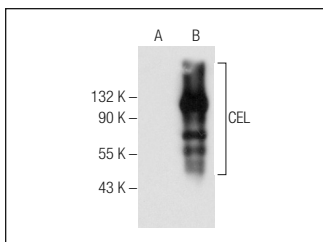
Molecular Weight of CEL: 74 kDa.

Positive Controls: CEL (h): 293T Lysate: sc-115618.

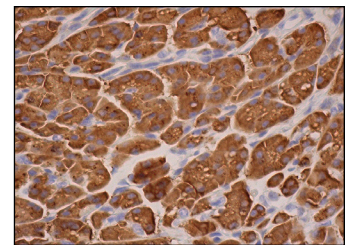
## RECOMMENDED SUPPORT REAGENTS

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. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850. 4) Immunohistochemistry: use m-IgGκ BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

## DATA



CEL (D-1): sc-376956. Western blot analysis of CEL expression in non-transfected: sc-117752 (A) and human CEL transfected: sc-115618 (B) 293T whole cell lysates.



CEL (D-1): sc-376956. Immunoperoxidase staining of formalin fixed, paraffin-embedded human pancreas tissue showing cytoplasmic staining of exocrine glandular cells.

## 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.