

**CES1 Antibody (C-term) Blocking Peptide**  
**Synthetic peptide**  
**Catalog # BP9927b****Specification**

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**CES1 Antibody (C-term) Blocking Peptide - Product Information**Primary Accession [P23141](#)**CES1 Antibody (C-term) Blocking Peptide - Additional Information****Gene ID** 1066**Other Names**

Liver carboxylesterase 1, Acyl-coenzyme A:cholesterol acyltransferase, ACAT, Brain carboxylesterase hBr1, Carboxylesterase 1, CE-1, hCE-1, Cocaine carboxylesterase, Egasyn, HMSE, Methylumbelliferyl-acetate deacetylase 1, Monocyte/macrophage serine esterase, Retinyl ester hydrolase, REH, Serine esterase 1, Triacylglycerol hydrolase, TGH, CES1, CES2, SES1

**Format**

Peptides are lyophilized in a solid powder format. Peptides can be reconstituted in solution using the appropriate buffer as needed.

**Storage**

Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C.

**Precautions**

This product is for research use only. Not for use in diagnostic or therapeutic procedures.

**CES1 Antibody (C-term) Blocking Peptide - Protein Information****Name** CES1 ([HGNC:1863](#))**Synonyms** CES2, SES1**Function**

Involved in the detoxification of xenobiotics and in the activation of ester and amide prodrugs (PubMed:<a href="http://www.uniprot.org/citations/7980644" target="\_blank">7980644</a>, PubMed:<a href="http://www.uniprot.org/citations/9169443" target="\_blank">9169443</a>, PubMed:<a href="http://www.uniprot.org/citations/9490062" target="\_blank">9490062</a>, PubMed:<a href="http://www.uniprot.org/citations/18762277" target="\_blank">18762277</a>). Hydrolyzes aromatic and aliphatic esters, but has no catalytic activity toward amides or a fatty acyl-CoA ester (PubMed:<a href="http://www.uniprot.org/citations/7980644" target="\_blank">7980644</a>, PubMed:<a href="http://www.uniprot.org/citations/9169443" target="\_blank">9169443</a>, PubMed:<a href="http://www.uniprot.org/citations/9490062" target="\_blank">9490062</a>, PubMed:<a href="http://www.uniprot.org/citations/18762277" target="\_blank">18762277</a>). Hydrolyzes the methyl ester group of cocaine to form benzoylecgonine (PubMed:<a href="http://www.uniprot.org/citations/7980644" target="\_blank">7980644</a>). Catalyzes the transesterification of cocaine to form cocaethylene

(PubMed:<a href="http://www.uniprot.org/citations/7980644" target="\_blank">7980644</a>). Displays fatty acid ethyl ester synthase activity, catalyzing the ethyl esterification of oleic acid to ethyloleate (PubMed:<a href="http://www.uniprot.org/citations/7980644" target="\_blank">7980644</a>). Converts monoacylglycerides to free fatty acids and glycerol. Hydrolyzes of 2-arachidonoylglycerol and prostaglandins (PubMed:<a href="http://www.uniprot.org/citations/21049984" target="\_blank">21049984</a>). Hydrolyzes cellular cholesteryl esters to free cholesterol and promotes reverse cholesterol transport (RCT) by facilitating both the initial and final steps in the process (PubMed:<a href="http://www.uniprot.org/citations/18762277" target="\_blank">18762277</a>, PubMed:<a href="http://www.uniprot.org/citations/16024911" target="\_blank">16024911</a>, PubMed:<a href="http://www.uniprot.org/citations/11015575" target="\_blank">11015575</a>, PubMed:<a href="http://www.uniprot.org/citations/16971496" target="\_blank">16971496</a>). First of all, allows free cholesterol efflux from macrophages to extracellular cholesterol acceptors and secondly, releases free cholesterol from lipoprotein-delivered cholesteryl esters in the liver for bile acid synthesis or direct secretion into the bile (PubMed:<a href="http://www.uniprot.org/citations/18762277" target="\_blank">18762277</a>, PubMed:<a href="http://www.uniprot.org/citations/18599737" target="\_blank">18599737</a>, PubMed:<a href="http://www.uniprot.org/citations/16971496" target="\_blank">16971496</a>).

### Cellular Location

Endoplasmic reticulum lumen. Cytoplasm Lipid droplet. Note=Moves from cytoplasm to lipid droplets upon lipid loading. Associates with lipid droplets independently of triglycerides (TG) content of the droplets and hydrolyzes cholesteryl esters more efficiently from mixed droplets

### Tissue Location

Expressed predominantly in liver with lower levels in heart and lung (PubMed:10562416).  
Expressed in macrophages (PubMed:11015575, PubMed:21049984, PubMed:18762277)

## CES1 Antibody (C-term) Blocking Peptide - Protocols

Provided below are standard protocols that you may find useful for product applications.

- [Blocking Peptides](#)

## CES1 Antibody (C-term) Blocking Peptide - Images

## CES1 Antibody (C-term) Blocking Peptide - Background

Carboxylesterase 1 is a member of a large multigene family. The enzymes encoded by these genes are responsible for the hydrolysis of ester- and amide-bond-containing drugs such as cocaine and heroin. They also hydrolyze long-chain fatty acid esters and thioesters. This enzyme is known to hydrolyze aromatic and aliphatic esters and is necessary for cellular cholesterol esterification. It may also play a role in detoxification in the lung and/or protection of the central nervous system from ester or amide compounds. Carboxylesterase deficiency may be associated with non-Hodgkin lymphoma or B-cell lymphocytic leukemia.

## CES1 Antibody (C-term) Blocking Peptide - References

Maruichi, T., et al. Biochem. Pharmacol. 79(2):288-295(2010)Nemoda, Z., et al. Neuropharmacology 57 (7-8), 731-733 (2009) :Na, K., et al. Proteomics 9(16):3989-3999(2009)Sanghani, S.P., et al. Protein Pept. Lett. 16(10):1207-1214(2009)