

Goat Anti-CES1 Antibody
Peptide-affinity purified goat antibody
Catalog # AF1232a**Specification**

Goat Anti-CES1 Antibody - Product Information

Application	WB, IHC, E
Primary Accession	P23141
Other Accession	NP_001257 , 1066
Reactivity	Human
Host	Goat
Clonality	Polyclonal
Concentration	0.5mg/ml
Isotype	IgG
Calculated MW	62521

Goat Anti-CES1 Antibody - 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, 3.1.1.1, Cocaine carboxylesterase, Egasyn, HMSE, Methylumbelliferyl-acetate deacetylase 1, 3.1.1.56, Monocyte/macrophage serine esterase, Retinyl ester hydrolase, REH, Serine esterase 1, Triacylglycerol hydrolase, TGH, CES1, CES2, SES1

Dilution

WB~~1:1000
IHC~~1:100~500
E~~N/A

Format

0.5 mg IgG/ml in Tris saline (20mM Tris pH7.3, 150mM NaCl), 0.02% sodium azide, with 0.5% bovine serum albumin

Storage

Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.

Precautions

Goat Anti-CES1 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Goat Anti-CES1 Antibody - 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:18762277, PubMed:7980644, PubMed:9169443, PubMed:9490062). Hydrolyzes aromatic and aliphatic esters, but has no catalytic activity toward amides or a fatty acyl-CoA ester (PubMed:18762277, PubMed:7980644, PubMed:9169443, PubMed:9490062). Hydrolyzes the methyl ester group of cocaine to form benzoylecgonine (PubMed:7980644). Catalyzes the transesterification of cocaine to form cocaethylene (PubMed:7980644). Displays fatty acid ethyl ester synthase activity, catalyzing the ethyl esterification of oleic acid to ethyloleate (PubMed:7980644). Converts monoacylglycerides to free fatty acids and glycerol. Hydrolyzes of 2-arachidonoylglycerol and prostaglandins (PubMed:21049984). 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:11015575, PubMed:16024911, PubMed:16971496, PubMed:18762277). 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:16971496, PubMed:18599737, PubMed:18762277).

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:18762277, PubMed:21049984)

Goat Anti-CES1 Antibody - Protocols

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

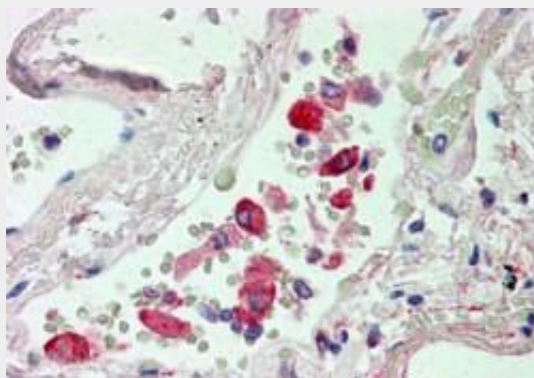
- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)

- [Cell Culture](#)

Goat Anti-CES1 Antibody - Images



AF1232a (0.03 µg/ml) staining of Human Liver lysate (35 µg protein in RIPA buffer). Primary incubation was 1 hour. Detected by chemiluminescence.



AF1232a (2.5 µg/ml) staining of paraffin embedded Human Lung. Steamed antigen retrieval with citrate buffer pH 6, AP-staining.

Goat Anti-CES1 Antibody - Background

This gene encodes a member of the carboxylesterase large family. The family members are responsible for the hydrolysis or transesterification of various xenobiotics, such as cocaine and heroin, and endogenous substrates with ester, thioester, or amide bonds. They may participate in fatty acyl and cholesterol ester metabolism, and may play a role in the blood-brain barrier system. This enzyme is the major liver enzyme and functions in liver drug clearance. Mutations of this gene cause carboxylesterase 1 deficiency. Three transcript variants encoding three different isoforms have been found for this gene.

Goat Anti-CES1 Antibody - References

Activity-based protein profiling identifies a host enzyme, carboxylesterase 1, which is differentially active during hepatitis C virus replication. Blais DR, et al. J Biol Chem, 2010 Aug 13. PMID 20530478.

Evaluation of Candidate Genes for Cholinesterase Activity in Farmworkers Exposed to Organophosphorous Pesticides - Association of SNPs in BCHE. Howard TD, et al. Environ Health Perspect, 2010 Jun 8. PMID 20529763.

Mammalian carboxylesterase 3: comparative genomics and proteomics. Holmes RS, et al. Genetica, 2010 Jul. PMID 20422440.

Genetic variation in carboxylesterase genes and susceptibility to isoniazid-induced hepatotoxicity.

Yamada S, et al. Pharmacogenomics J, 2010 Mar 2. PMID 20195289.

In silico prediction of human carboxylesterase-1 (hCES1) metabolism combining docking analyses and MD simulations. Vistoli G, et al. Bioorg Med Chem, 2010 Jan 1. PMID 19932971.

Goat Anti-CES1 Antibody - Citations

- [Suppression of Carboxylesterases by Imatinib Mediated by the Downregulation of Pregnane X Receptor.](#)