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Anti-Carboxylesterase 1 / CES1 Antibody

Rabbit Anti Human Polyclonal Antibody
Catalog # ALS18329

Product Information

Application	WB, IHC-P
Primary Accession	P23141
Predicted	Human, Mouse, Rat
Host	Rabbit
Clonality	Polyclonal
Isotype	IgG
Calculated MW	62521

Additional Information

Gene ID	1066
Alias Symbol	CES1
Other Names	CES1, ACAT, Brain carboxylesterase hBr1, Carboxylesterase 1, Carboxylesterase 2 (liver), CEH, CES1A1, CES1A2, Cocaine carboxylesterase, Egasyn, HMSE, Liver carboxylesterase 1, HCE-1, PCE-1, Retinyl ester hydrolase, TGH, Triacylglycerol hydrolase, REH ...
Target/Specificity	Human Carboxylesterase 1 / CES1
Reconstitution & Storage	Affinity purified
Precautions	Anti-Carboxylesterase 1 / CES1 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

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 cholesterols 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)

Citations

- Insulin transcriptionally down-regulates carboxylesterases through pregnane X receptor in an Akt-dependent manner.

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.