

Recombinant Human CES1, His-tagged

Cat. No. CES1-901H **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Recombinant Human CES1(His19-Glu563) fused with 10-his tag at C-terminal was expressed in Mouse NSO Cells.
Species	Human
Source	NSO
Description	Carboxylesterase 1 is a member of a large family of carboxylesterases that are responsible for the hydrolysis of ester and amide bonds. They have broad substrate specificity ranging from small molecule esters such as phenylester to long chain fatty acid esters and thioesters. They play a major role as determinants of pharmacokinetic behavior for most therapeutic agents containing an ester. By deesterification, they can activate or inactivate the agents. They also participate in detoxification of drugs such as cocaine and heroin in serum and liver. The resulting deesterified metabolites are secreted out in urine. They can also detoxify organophosphate and carbamate analogues used in agrochemicals or chemical nerve agents, such as malathion, sarin, tabun, and VX. In addition to the hydrolytic activity, they can perform transesterification, a reaction important for cholesterol homeostasis. Carboxylesterase deficiency may be associated with non-Hodgkin lymphoma or B cell lymphocytic leukemia. CES1 shares the serine hydrolase fold observed in other esterases. CES1 possesses an endoplasmic reticulum retention signal (HIEL) at its C-terminus. The purified rhCES 1 lacks this signal, resulting in its secretion.
Predicted Molecular Mass	61 kDa

 Tel: 1-631-559-9269 1-516-512-3133

 Email: info@creative-biomart.com  Fax: 1-631-938-8127

 45-1 Ramsey Road, Shirley, NY 11967, USA

N-terminal Sequence	His19
Formulation	Supplied as a 0.2 µm filtered solution in Sodium Acetate and NaCl.
Purity	>95%, by SDSPAGE under reducing conditions and visualized by silver stain.
SDS-PAGE	61 kDa, reducing conditions
Activity	Measured by its ability to hydrolyze p-nitrophenylacetate. The specific activity is >6,000 pmol/min/µg, as measured under the described conditions.
Endotoxin Level	<1.0 EU per 1 µg of the protein by the LAL method.
Storage	Use a manual defrost freezer and avoid repeated freeze-thaw cycles. 6 months from date of receipt, 20 to 70°C as supplied. 3 months, 20 to 70°C under sterile conditions after opening.
Official Symbol	CES1

GENE INFORMATION

Gene Name	CES1 carboxylesterase 1 [Homo sapiens]
Synonyms	CES1; carboxylesterase 1; CEH; REH; TGH; ACAT; CE-1; CES2; HMSE; SES1; HMSE1; PCE-1; hCE-1; liver carboxylesterase 1; egasyn; serine esterase 1; retinyl ester hydrolase; cocaine carboxylesterase; triacylglycerol hydrolase; carboxylesterase 2 (liver); brain carboxylesterase hBr1; cholesteryl ester hydrolase; monocyte/macrophage serine esterase; methylumbelliferyl-acetate deacetylase 1; acyl coenzyme A:cholesterol acyltransferase; acyl-coenzyme A:cholesterol acyltransferase; human monocyte/macrophage serine esterase 1; carboxylesterase 1 (monocyte/macrophage serine esterase 1); EC 3.1.1.1; EC 3.1.1.56; MT 1A; MT 2;

 Tel: 1-631-559-9269 1-516-512-3133

 Email: info@creative-biomart.com  Fax: 1-631-938-8127

 45-1 Ramsey Road, Shirley, NY 11967, USA

	MGC32848; MT2A
Gene ID	1066
mRNA Refseq	NM_001266
Protein Refseq	NP_001257
MIM	114835
UniProt ID	P23141
Chromosome Location	16q22.2
Pathway	Drug metabolism - other enzymes; E2F transcription factor network; Fluoropyrimidine Activity; Irinotecan Pathway; retinol biosynthesis
Function	carboxylesterase activity; methyl indole-3-acetate esterase activity; methyl jasmonate esterase activity; methylumbelliferyl-acetate deacetylase activity; retinyl-palmitate esterase activity

carboxylesterase 1

