

Carboxylesterase 1 (CES1) Active Protein | CES1 active protein

Active Carboxylesterase 1 (CES1)

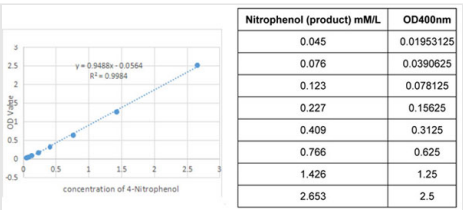
CATALOG # AAA149260	HOST E. coli	REACTIVITY Homo sapiens (Human)	APPLICATIONS Activity Assay, Cell Culture
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PRODUCT SYNONYMS

Carboxylesterase 1 (CES1); Active Carboxylesterase 1 (CES1); ACAT; CEH; CES2; HMSE1; PCE1; SES1; TGH; Retinyl ester hydrolase; Serine esterase 1; Triacylglycerol hydrolase; Egasyn; Cocaine carboxylesterase; Liver Carboxylesterase 1; CES1 active protein

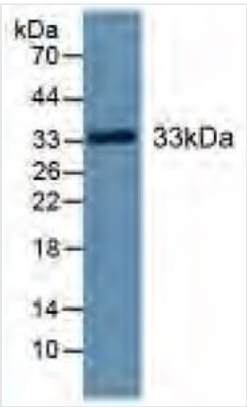
PRODUCT SPECIFICATIONS

Host	E. coli
Reactivity	Homo sapiens (Human)
Purity/Purification	>90%
Form/Format	20mM Tris, 150mM NaCl, pH8.0, containing 0.01% sarcosyl and 5% trehalose.
Concentration	Original Concentration: 400ug/mL (varies by lot)
Applicable Applications for CES1 active protein	Activity Assay, Cell Culture
Source	Prokaryotic expression.
Residues	Gly18~Leu299
Tags	N-terminal His-tag
Endotoxin Level	<1.0EU per 1ug (determined by the LAL method).
Predicted isoelectric point	6.8
Usage	Reconstitute in 20mM Tris, 150mM NaCl (pH8.0) to a concentration of 0.1-1.0 mg/mL. Do not vortex.
Preparation and Storage	Storage: Avoid repeated freeze/thaw cycles. Store at 2-8 degree C for one month. Aliquot and store at -80 degree C for 12 months. Stability Test: The thermal stability is described by the loss rate. The loss rate was determined by accelerated thermal degradation test, that is, incubate the protein at 37 degree C for 48h, and no obvious degradation and precipitation were observed. The loss rate is less than 5% within the expiration date under appropriate storage condition.



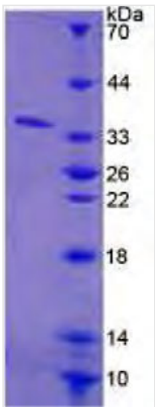
Bioactivity

The standard curve of 4-Nitrophenol.Carboxylesterase 1 (CES1) also known as Liver carboxylesterase 1 is a serine esterase and member of a large multigene carboxylesterase family. The protein Involved in the detoxification of xenobiotics and in the activation of ester and amide prodrugs. Hydrolyzes aromatic and aliphatic esters, but has no catalytic activity toward amides or a fatty acyl-CoA ester. Hydrolyzes the methyl ester group of cocaine to form benzoylecgonine. Thus, the recombinant human CES1 activity was measured by its ability to hydrolyze 4-Nitrophenyl acetate (4-NPA) to 4-Nitrophenol. The reaction was performed in 50mM Tris, pH 7.5 (Assay Buffer), initiated by addition 50uL of various concentrations of CES1 (dilute by assay buffer) to 50uL of 2mM Substrate 4-NPA (100mM stock in Acetone, dilute by deionized water). Incubated at 37 degree C for 10min, then read at a wavelength of 400nm. One unit of enzyme activity is defined as the 1ug of enzyme required to convert 1pmol of 4-Nitrophenyl acetate to 4-Nitrophenol in 1min at 37°C. The specific activity of recombinant human CES1 is 1396 pmol/min/ug. Specific Activity (pmol/min/ug) = $\Delta OD \times F \times N \times \Delta t \div \Delta OD - \text{Adjusted for Substrate Blank} \times F = \text{Conversion Factor (convert from standard curve of 4-Nitrophenol)} \times T = \text{Time} \times N = \text{Amount of enzyme}$



WB (Western Blot)

Western BlotSample: Recombinant human, CES1Antibody: Rabbit Anti-CES1 human Ab



Sequence

LGIPFAKPPL	GPLRFTPPQP	AEPWSFVKNA	TSYPPMCTQD	PKAGQLLSEL
FTNRKENIPL	KLSEDCLYLN	IYTPADLTKK	NRLPVMVWIH	GGGLMVGAAS
TYDGLALAAH	ENVVVVTIQY	RLGNGFFST	GDEHSRGNG	HLDQVAALRW
VQDNIAFSGG	NPGSVTIFGE	SAGGESVSVL	VLSPLAKNLF	HRAISESGVA
LTSVLVKKGD	VKPLAEQIAI	TAGCKTTTSA	VMVHCLRQKT	EEELLETTL

SDS-PAGE

SDS-PAGESample: Active recombinant human, CES1

ADDITIONAL INFORMATION

Product Categories/Family for CES1 active protein	Enzyme & Kinase; Metabolic pathway; Neuroscience
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NCBI AND UNIPROT INFORMATION

NCBI GI #	119576
NCBI GeneID	1066
UniProt Accession #	P23141
Molecular Weight	Predicted Molecular Mass: 34.0kDa Accurate Molecular Mass: 35kDa as determined by SDS-PAGE reducing conditions.
NCBI Official Full Name	Liver carboxylesterase 1
NCBI Official Synonym Full Names	carboxylesterase 1
NCBI Official Symbol	CES1
NCBI Official Synonym Symbols	CEH; REH; TGH; ACAT; CE-1; CES2; HMSE; SES1; HMSE1; PCE-1; hCE-1

NCBI Protein Information	liver carboxylesterase 1
UniProt Protein Name	Liver carboxylesterase 1
UniProt Gene Name	CES1
UniProt Synonym Gene Names	CES2; SES1; ACAT; CE-1; hCE-1; REH; TGH
UniProt Entry Name	EST1_HUMAN

For Research Use Only. Not for use in diagnostic or therapeutic procedures. Small volumes of product may become entrapped in the seal of the vial during shipment and storage; if necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the cap.

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Online datasheet: <https://stage.aaabiotech.com/e-coli-homo-sapiens-human-active-protein/carboxylesterase-1-ces1/149260>