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**Product Data Sheet**


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Product Name: CES1 Human  
 Cat. No.: GP21476  
 Batch No.: 1

**Product Data**

Purity	>98%	Source	Sf9, Baculovirus cells.
Physical Appearance	solid	Shipping Condition	Shipped with Ice Packs.
Synonyms	Liver carboxylesterase 1 isoform a; CES1; ACAT; CE-1; CEH; CES2; hCE-1; HMSE; HMSE1; PCE-1; REH; SES1; TGH; Acyl-coenzyme A:cholesterol acyltransferase; Brain carboxylesterase hBr1.		
Amino Acid Sequence	ADLGHPSSPP VVDTVHGKVL GKFSVLEGFA QPVAIFLGIP FAKPPLGPLR FTTPQPAEPWSFVKNATSYP PMCTQDPKAG QLLSELFTRN KENIPLKLSE DCLYLNITP ADLTKKNRPLVMVWIHGGGL MVGAASTYDG LALAAHENVV VVTIQYRLGI WGGFSTGDEH SRGNWGHLDQVAALRWVQDN IASFGGNPGS VTIFGESAGG ESVSVLVLSP LAKNLFHRAI SESGVALTSVLVKKGDVKPL AEQIAITAGC KTTTSAVMVH CLRQKTEEEL LETTLKMKFL SLDLQGDPRESQPLLGTVID GMLLLKTPEE LQAERNFHTV PYMVGINKQE FGWLIPMQLM SYPLSEGQLDQKTAMSLWK SYPLVCIAKE LIPEATEKYL GGTDDTVKKK DLFLDLIADV MFGVPSVIVARNHRDAGAPT YMYEFQYRPS FSSDMKPKTV IGDHGDDELFS VFGAPFLKEG ASEEEIRLSKMVMKFWANFA RNGNPNGEGL PHWPEYNQKE GYLQIGANTQ AAQKLKDKEV AFWTNLFACK AVEKPPQTEH IELHHHHHHH.		
Formulation	CES1 protein solution (0.5mg/ml) contains 25mM Sodium Acetate (pH 4.0), 10% glycerol, 0.1M NaCl and 0.1mM PMSF.		

**Introduction**

CES1 is a part of the alpha/beta fold hydrolase family and participates in the detoxification of xenobiotics and in the activation of ester and amide prodrugs. CES1 hydrolyzes aromatic and aliphatic esters, although it has no catalytic activity toward amides or a fatty acyl-CoA ester. CES1 hydrolyzes the methyl ester group of cocaine to form benzoylecgonine and catalyzes the transesterification of cocaine to form cocaethylene. CES1 also plays a role in detoxification in the lung and protection of the

**Caution: Product has not been fully validated for medical applications. For research use only.**

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central nervous system from ester or amide compounds. CES1 is found in most tissues, mainly in the liver.

### Stability

Store at 4°C if entire vial will be used within 2-4 weeks. Store, frozen at -20°C for longer periods of time. For long term storage it is recommended to add a carrier protein (0.1% HSA or BSA). Avoid multiple freeze-thaw cycles.

### Background

CES1 Human produced in Sf9 Insect cells is a single, glycosylated polypeptide chain containing 559 amino acids (19-568 a.a.) and having a molecular mass of 61.7kDa (Molecular size on SDS-PAGE will appear at approximately 50-70kDa). CES1 is expressed with a 9 amino acid His tag at C-Terminus and purified by proprietary chromatographic techniques.

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