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## Product Datasheet

### Human CES1 protein, His tag, Unconjugated GTX00177-PRO

Article Name	Human CES1 protein, His tag, Unconjugated
Biozol Catalog Number	GTX00177-PRO
Supplier Catalog Number	GTX00177-pro
Alternative Catalog Number	GTX00177-PRO-10
Manufacturer	GeneTex
Category	Proteine/Peptide
Application	FA
Species Reactivity	Human
Conjugation	Unconjugated
NCBI	<a href="#">1066</a>
UniProt	<a href="#">P23141</a>
Buffer	Reconstitute with 20mM Tris and 150mM NaCl to 0.1-1.0mg/ml. Do not vortex. Lyophilized from 20mM Tris, 150mM NaCl, 1mM EDTA, 1mM DTT, 0.01% SKL, 5% Trehalose, ProClin 300.
Expression System	E. coli
Form	Lyophilized powder
Sequence	N-terminal His-Tag, Gly18~Leu299 (NP_001020365.1)

Application Notes

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 50 mM Tris (pH 7.5, the Assay Buffer), initiated by addition 50  $\mu$ l of various concentrations of CES1 (dilute by assay buffer) to 50  $\mu$ l of 2 mM Substrate 4-NPA (100mM stock in Acetone, dilute by deionized water). Incubated at 37C for 10min, then read at a wavelength of 400nm. One unit of enzyme activity is defined as the 1  $\mu$ g of enzyme required to convert 1 pmol of 4-Nitrophenyl acetate to 4-Nitrophenol in 1min at 37C. The specific activity of recombinant human CES1 is 1396 pmol/min/ $\mu$ g.