Human CES2 / Carboxylesterase-2 Protein (His Tag)

Catalog Number: **10380-H08H**

General Information

Gene Name Synonym:

CE-2; CES2A1; iCE; PCE-2

Protein Construction:

A DNA sequence encoding the human CES2 isoform 1 (O00748-1) (Met 1-Leu 559) was expressed, with a C-terminal polyhistidine tag.

Source: Human

Expression Host: HEK293 Cells

QC Testing

Purity: > 95 % as determined by SDS-PAGE

Bio-activity:

Measured by its ability to hydrolyze p-nitrophenylacetate. The specific activity is > 20000 pmols/min/ug.

Endotoxin:

< 1.0 EU per μg of the protein as determined by the LAL method

Stability:

Samples are stable for up to twelve months from date of receipt at -70 ℃

Predicted N terminal: Gln 27

Molecular Mass:

The secreted recombinant human CES2 comprises 544 amino acids with a predicted molecular mass of 60.4 kDa, as estimated in SDS-PAGE under reducing conditions.

Formulation:

Lyophilized from sterile 50mM NaAc, 150mM NaCl, 10% Glycerol, pH 5.5

Normally 5 % - 8 % trehalose, mannitol and 0.01% Tween80 are added as protectants before lyophilization. Specific concentrations are included in the hardcopy of COA. Please contact us for any concerns or special requirements.

Usage Guide

Storage:

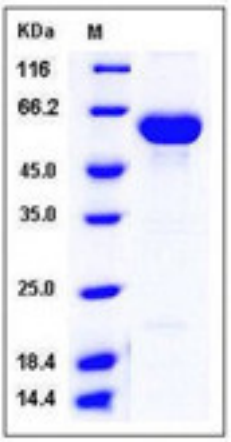
Store it under sterile conditions at -20℃ to -80℃ upon receiving. Recommend to aliquot the protein into smaller quantities for optimal storage.

Avoid repeated freeze-thaw cycles.

Reconstitution:

Detailed reconstitution instructions are sent along with the products.

SDS-PAGE:



Protein Description

Carboxylesterase 2 (CES2) is a member of the carboxylesterase family and belongs to the multigene family. Carboxylesterase 2 is responsible for the hydrolysis of ester- and amide-bond-containing drugs such as cocaine and beroin. It also serves to hydrolyze long-chain fatty acid esters and thioesters. It is speculated that carboxylesterases may play a role in lipid metabolism and the blood-brain barrier system and together with isform 1, are a serine esterase involved in both drug metabolism and activation. Human carboxylesterase 2 is commonly expressed in tumor tissues and irinotecan, a topoisomerase I inhibitor commonly used in the treatment of many solid tumors.

References

1.Imai T. *et al.* (2006) Human carboxylesterase isozymes: catalytic properties and rational drug design. Drug metab pharmacokinet. 21 (3): 173-85. 2.Guang Xu, *et al.* (2002) Human carboxylesterase 2 is commonly expressed in tumor tissue and is correlated with activation of irinotecan. Clin Cancer Res. 8: 2605. 3.Zhang, *et al.* (2002) Comprehensive Evaluation of Carboxylesterase-2 Expression in Normal Human Tissues Using Tissue Array Analysis. Applied Immunohistochemistry & Molecular Morphology. 10 (4): 374-80.