Mouse CES5 / Carboxylesterase-5 Protein (His Tag)

Catalog Number: **50620-M08H**

Sino Biological
Biological Solution Specialist

General Information

Gene Name Synonym:

1700081L16Rik; 1700122C07Rik; BB081581; cauxin; Ces7; Gm503

Protein Construction:

A DNA sequence encoding the extracellular domain of mouse CES5 (NP_766347.1) (Met 1-His 556) was expressed, with a C-terminal polyhistidine tag.

Source: Mouse

Expression Host: HEK293 Cells

QC Testing

Purity: > 88 % as determined by SDS-PAGE

Bio Activity:

Measured by its ability to hydrolyze pnitrophenylacetate. The specific activity is >50,000 pmoles/min/μg .

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 mouse CES5 comprises 541 amino acids and has a calculated molecular mass of 60.6 kDa. As a result of glycosylation, the recombinant protein migrates as an approximately 52 kDa band in SDS-PAGE under reducing conditions.

Formulation:

Lyophilized from sterile 25mM Tris, 150mM NaCl, pH 7.5

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:

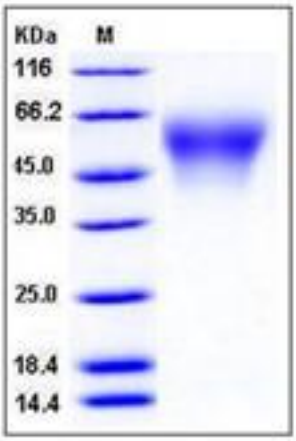
Store it under sterile conditions at -20℃ to -80℃ upon receiving. Recommend to aliquot the protein into smaller quantities for optimal storage.

Avoid repeated freeze-thaw cycles.

Reconstitution:

Detailed reconstitution instructions are sent along with the products.

SDS-PAGE:



Protein Description

Carboxylesterase belongs to the class of serine hydrolases family which includes Chymotrypsin and Acetylcholinesterase. Carboxylesterase is involved in the chemical reaction, exerting its role in catalyzing the carboxylic ester and water to convert to an alcohol and a carboxylate. Carboxylesterase is a type of enzyme that capable of hydrolyzing a variety of carboxylic acid esters and it's widely distributed in cells especially in mammalian liver. Carboxylesterase 5 (CES5), also known as cauxin or CES7, is one of CES enzyme families exerting role in catalyzing hydrolytic and transesterfication reactions with broad substrat specifity. CES5 is reported in high concentrations in the urine of adult male cats, and within a protein complex of mammalian male epididymal fluids. Roles for carboxylesterase 5 may include regulating urinary levels of cat pheromone, catalyzing lipid transfer reactions within mammalian male reproductive fluids, and protecting neural tissue from drugs and xenobiotics.

References

1.Holmes RS, *et al.* (2008) Mammalian carboxylesterase 5: comparative biochemistry and genomics. Comp Biochem Physiol Part D Genomics Proteomics. 3 (3): 196-204. 2.Tashiro F, *et al.* (2010) Maternal-effect gene Ces5 / Ooep / Moep19 / Floped is essential for oocyte cytoplasmic lattice formation and embryonic development at the maternal-zygotic stage transition. Genes to Cells. 15 (8): 813-28. 3.Mentlein R, *et al.* (1984) Comparative chemical and immunological characterization of five lipolytic enzymes (carboxylesterases) from rat liver microsomes. Arch Biochem Biophys. 234 (2): 612-21.