Human LTC4S / LTC4 synthase Protein (His Tag)

Catalog Number: **11622-H08B**

General Information

Gene Name Synonym:

LTC4S; MGC33147

Protein Construction:

A DNA sequence encoding the human LTC4S (NP_665874.1) (Met 1-Ala 150) was fused with a polyhistidine tag at the C-terminus.

Source: Human

Expression Host: Baculovirus-Insect Cells

QC Testing

Purity: > 90 % as determined by SDS-PAGE

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: Met 1

Molecular Mass:

The recombinant human LTC4S consists of 156 amino acids and predicts a molecular mass of 17 kDa as estimated in SDS-PAGE under reducing conditions.

Formulation:

Lyophilized from sterile 50mM Hepes, 0.1% Triton 0.5% DOC, 10% Gly, pH 8.0

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:

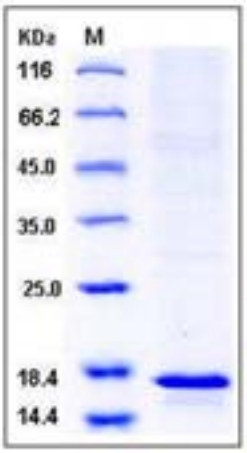
Store it under sterile conditions at -20℃ to -80℃ upon receiving. Recommend to aliquot the protein into smaller quantities for optimal storage.

Avoid repeated freeze-thaw cycles.

Reconstitution:

Detailed reconstitution instructions are sent along with the products.

SDS-PAGE:



Protein Description

Leukotriene C4 synthase, also known as LTC4 synthase, Leukotriene-C(4) synthase, and LTC4S, is a multi-pass membrane protein which belongs to theMAPEG family. LTC4S is detected in lung, platelets and the myelogenous leukemia cell line KG-1 (at protein level). LTC4S activity is present in eosinophils, basophils, mast cells, certain phagocytic mononuclear cells, endothelial cells, vascular smooth muscle cells and platelets. LTC4S is essential for the production of cysteinyl leukotrienes (Cys-LT), critical mediators in asthma. Mutagenic analysis of the conjugation function of human LTC4S has identified R51 and Y93 as critical for acid and base catalysis of LTA4 and reduced glutathione, respectively. A comparison across species for proteins that possess LTC4S activity reveals conservation of both of these residues, whereas R51 is absent in the FLAP molecules. Thus, within the glutathione S-transferase superfamily of genes, alignment of specific residues allows the separation of LTC4S family members from their most structurally similar counterparts, the FLAP molecules. Defects in LTC4S are the cause of leukotriene C4 synthase deficiency (LTC4 synthase deficiency). LTC4 synthase deficiency is a fatal neurometabolic developmental disorder. It is associated with muscular hypotonia, psychomotor retardation, failure to thrive, and microcephaly.

References

1.Gupta, N. et al., 1999, FEBS Lett. 449 (1): 66-70. 2.Penrose, JF. et al., 1999, Allergy Asthma Proc. 20 (6): 353-60. 3.Sayers, I. et al., 2003, Thorax. 58 (5): 417-24.