Recombinant Protein Technical Manual

Recombinant Human LTC4S/LTC4 synthase Protein (His Tag)

RPES0616

Product Data:

Product SKU: RPES0616

Size: 20µg

Species: Human

Expression host: Baculovirus-Insect Cells

Uniprot: NP_665874.1

Protein Information:

Molecular Mass: 17 kDa

AP Molecular Mass: 17 kDa

Tag: C-His

Bio-activity:

Purity: > 90 % as determined by reducing SDS-PAGE.

Endotoxin: < 1.0 EU per µg as determined by the LAL method.

Storage: Lyophilized proteins are stable for up to 12 months when stored at -20 to -80°C. Reconstituted protein solution can be stored at 4-8℃ for 2-7 days. Aliquots of reconstituted samples are stable at < -20℃ for 3 months.

Shipping: This product is provided as lyophilized powder which is shipped with ice packs.

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

Reconstitution: Please refer to the printed manual for detailed information.

Application:

Synonyms: LTC4S;MGC33147

Immunogen Information:

Sequence: Met 1-Ala 150

Background:

Leukotriene C4 synthase, also known as LTC4 synthase, Leukotriene-C(4) synthase, and LTC4S, is a multi-pass membrane protein which belongs to the MAPEG family. LTC4S is detected in lung, platelets and the myelogenous leukemia cell line KG (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.