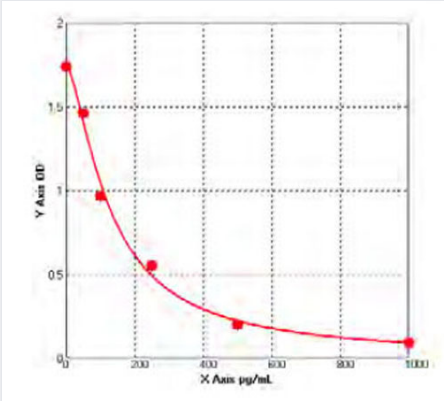
Leukotriene C4 (LTC4) ELISA Kit for Human

PRODUCT OVERVIEW

Product Name	Leukotriene C4 (LTC4), ELISA Kit
Full Product Name	Human Leukotriene C4 ELISA Kit
Product Gene Name	LTC4 elisa kit
Species Reactivity	Human
Assay Type	Quantitative Competitive
Samples	Serum, plasma, cell culture supernatants, body fluid and tissue homogenate
Sensitivity	1.0 pg/mL
Specificity	This assay has high sensitivity and excellent specificity for detection of LTC4. No significant cross-reactivity or interference between LTC4 and analogues was observed. NOTE: Limited by current skills and knowledge, it is impossible for us to complete the cross-reactivity detection between LTC4 and all the analogues, therefore, cross reaction may still exist in some cases.
Preparation and Storage	Store all reagents at 2-8 degree C.
Molecular Weight	16,567 Da
OMIM	246530
Sample Preparation	We suggest pre-experimenting with neat (undiluted) samples, 1:2 or 1:4 dilutions. Please avoid diluting your samples more than 1:10 as it would exceed the dilution limit set for this kit. If the expected concentration of the target is beyond the detection range of the kit, please contact our technical support team
Product Categories/Family for LTC4 elisa kit	Immunology
ISO Certification	Manufactured in an ISO 13485:2016 Certified Laboratory.
Related Product Information for LTC4 elisa kit	Principle of the Assay: LTC4 ELISA kit applies the competitive enzyme immunoassay technique utilizing a polyclonal anti-LTC4 antibody and an LTC4-HRP conjugate. The assay sample and buffer are incubated together with LTC4-HRP conjugate in pre-coated plate for one hour. After the incubation period, the wells are decanted and washed five times. The wells are then incubated with a substrate for HRP enzyme. The product of the enzyme-substrate reaction forms a blue colored complex. Finally, a stop solution is added to stop the reaction, which will then turn the solution yellow. The intensity of color is measured spectrophotometrically at 450nm in a microplate reader. The intensity of the color is inversely proportional to the LTC4 concentration since LTC4 from samples and LTC4-HRP conjugate compete for the anti-LTC4 antibody binding site. Since the number of sites is limited, as more sites are occupied by LTC4 from the sample, fewer sites are left to bind LTC4-HRP conjugate. A standard curve is plotted relating the intensity of the color (O.D.) to the concentration of standards. The LTC4 concentration in each sample is interpolated from this standard curve. Intended Uses: This LTC4 ELISA kit is a 1.5 hour solid-phase ELISA designed for the quantitative determination of Human LTC4. This ELISA kit for research use only, not for therapeutic or test applications!
Other Notes	Small volumes of LTC4 elisa kit vial(s) may occasionally become entrapped in the seal of the product vial during shipment and storage. If necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the container`s cap. Certain products may require to ship with dry ice and additional dry ice fee may apply.

Searchable Terms for LTC4 purchase	MBS730206 is a ready-to-use microwell, strip plate ELISA (enzyme-linked immunosorbent assay) Kit for analyzing the presence of the Leukotriene C4 (LTC4) ELISA Kit target analytes in biological samples. The concentration gradients of the kit standards or positive controls render a theoretical kit detection range in biological research samples containing LTC4. The ELISA analytical biochemical technique of the MBS730206 kit is based on LTC4 antibody-LTC4 antigen interactions (immunosorbency) and an HRP colorimetric detection system to detect LTC4 antigen targets in samples. The ELISA Kit is designed to detect native, not recombinant, LTC4. Appropriate sample types may include undiluted body fluids and/or tissue homogenates, secretions. Quality control assays assessing reproducibility identified the intra-assay CV (%) and inter-assay CV(%).



Typical Testing Data/Standard Curve (for reference only) of LTC4 elisa kit

ADDITIONAL DETAILS

NCBI/Uniprot data below describe general gene information for LTC4. It may not necessarily be applicable to this product.

NCBI GI #	22035629
NCBI GeneID	4056
NCBI Accession #	NP_665874.1
UniProt Secondary Accession #	Q8N6P0; Q9UC73; Q9UD18
UniProt Related Accession #	Q16873
GenBank Nucleotide #	NM_145867.1
NCBI Official Full Name	leukotriene C4 synthase
NCBI Official Synonym Full Names	leukotriene C4 synthase
NCBI Official Symbol	LTC4S
UniProt Protein Name	Leukotriene C4 synthase
UniProt Synonym Protein Names	Leukotriene-C(4) synthase
Protein Family	Leukotriene C4 synthase
UniProt Gene Name	LTC4S
UniProt Synonym Gene Names	LTC4 synthase
UniProt Entry Name	LTC4S_HUMAN
NCBI Protein Information	leukotriene C4 synthase; LTC4 synthase
NCBI Summary for LTC4	The MAPEG (Membrane Associated Proteins in Eicosanoid and Glutathione metabolism) family includes a number of human proteins, several of which are involved the production of leukotrienes. This gene encodes an enzyme that catalyzes the first step in the biosynthesis of cysteinyl leukotrienes, potent biological compounds derived from arachidonic acid. Leukotrienes have been implicated as mediators of anaphylaxis and inflammatory conditions such as human bronchial asthma. This protein localizes to the nuclear envelope and adjacent endoplasmic reticulum. [provided by RefSeq, Jul 2008]

UniProt Comments for LTC4	LTC4S: Catalyzes the conjugation of leukotriene A4 with reduced glutathione to form leukotriene C4. 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. Belongs to the MAPEG family. Protein type: Lyase; Membrane protein, integral; Nuclear envelope; Lipid Metabolism - arachidonic acid; EC 4.4.1.20; Membrane protein, multi-pass; Endoplasmic reticulum Chromosomal Location of Human Ortholog: 5q35 Cellular Component: nuclear outer membrane; endoplasmic reticulum membrane; intracellular membrane-bound organelle; endoplasmic reticulum; integral to membrane; nuclear envelope Molecular Function: protein binding; glutathione transferase activity; leukotriene-C4 synthase activity; enzyme activator activity; glutathione peroxidase activity; lipid binding Biological Process: positive regulation of catalytic activity; leukotriene biosynthetic process; lipoxygenase pathway; arachidonic acid metabolic process; leukotriene metabolic process Disease: Leukotriene C4 Synthase Deficiency
Research Articles on LTC4	**1.** Biochemical and structural characterization of LTC4S mutants along with crystal structures of the wild type and mutated enzymes in complex with three product analogs, provide new insights to binding of substrates and product.
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