Cystathionine Gamma-Lyase (CTH) ELISA Kit for Human

PRODUCT OVERVIEW

Product Name	Cystathionine gamma-lyase (CTH), ELISA Kit
Full Product Name	Human Cystathionine gamma-lyase (CTH) ELISA Kit
Product Gene Name	CTH elisa kit
Product Synonym Names	MGC9471; cystathionase; cysteine desulfhydrase; gamma-cystathionase; homoserine deaminase; homoserine dehydratase
Species Reactivity	Human
Assay Type	Quantitive Sandwich
Samples	Serum, Plasma, Other Biological Fluids
Specificity	This assay has high sensitivity and excellent specificity for detection of Human CTH. No significant cross-reactivity or interference between Human CTH and analogues was observed.
Preparation and Storage	Store at 2-8 degree C.
Molecular Weight	41,260 Da
OMIM	S52784 mRNA
3D Structure	ModBase 3D Structure for P32929
Detection Wavelength	450 nm
Intra-assay Precision (Precision within an assay)	Three samples of known concentration were tested twenty times on one plate to assess intra-assay precision.
Inter-assay Precision (Precision between assays)	Three samples of known concentration were tested in forty separate assays to assess inter-assay precision.
CV (%)	= SD/meanX100
Intra-Assay	CV
Inter-Assay	CV
ISO Certification	Manufactured in an ISO 9001:2015 Certified Laboratory.
Related Product Information for CTH elisa kit	This assay employs a two-site sandwich ELISA to quantitate CTH in samples. An antibody specific for CTH has been pre-coated onto a microplate. Standards and samples are pipetted into the wells and any CTH present is bound by the immobilized antibody. After removing any unbound substances, a biotin-conjugated antibody specific for CTH is added to the wells. After washing, Streptavidin conjugated Horseradish Peroxidase (HRP) is added to the wells. Following a wash to remove any unbound avidin-enzyme reagent, a substrate solution is added to the wells and color develops in proportion to the amount of CTH bound in the initial step. The color development is stopped and the intensity of the color is measured.
Other Notes	Small volumes of CTH 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 CTH purchase	MBS287740 is a ready-to-use microwell, strip-or-full plate ELISA (enzyme-linked immunosorbent assay) Kit for analyzing the presence of the Cystathionine gamma-lyase (CTH) 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 CTH. The ELISA analytical biochemical technique of the MBS287740 kit is based on CTH antibody-CTH antigen interactions (immunosorbency) and an HRP colorimetric detection system to detect CTH antigen targets in samples. The ELISA Kit is designed to detect native, not recombinant, CTH. 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(%).

ADDITIONAL DETAILS

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

NCBI GI #	299473759
NCBI GeneID	1491
NCBI Accession #	NP_001177392.1
UniProt Primary Accession #	P32929
UniProt Secondary Accession #	Q53FB3; Q53Y79; Q9H4W7; Q9H4W8; B4E1R2; E9PDV0
UniProt Related Accession #	P32929
GenBank Nucleotide #	NM_001190463.1
NCBI Official Full Name	cystathionine gamma-lyase isoform 3
NCBI Official Synonym Full Names	cystathionine gamma-lyase
NCBI Official Symbol	CTH
UniProt Protein Name	Cystathionine gamma-lyase
UniProt Synonym Protein Names	Cysteine-protein sulfhydrase; Gamma-cystathionase
Protein Family	Cystathionine gamma-lyase
UniProt Gene Name	CTH
NCBI Protein Information	cystathionine gamma-lyase
NCBI Summary for CTH	This gene encodes a cytoplasmic enzyme in the trans-sulfuration pathway that converts cystathione derived from methionine into cysteine. Glutathione synthesis in the liver is dependent upon the availability of cysteine. Mutations in this gene cause cystathioninuria. Alternative splicing of this gene results in three transcript variants encoding different isoforms. [provided by RefSeq, Jun 2010]
UniProt Comments for CTH	Catalyzes the last step in the trans-sulfuration pathway from methionine to cysteine. Has broad substrate specificity. Converts cystathionine to cysteine, ammonia and 2-oxobutanoate. Converts two cysteine molecules to lanthionine and hydrogen sulfide. Can also accept homocysteine as substrate. Specificity depends on the levels of the endogenous substrates. Generates the endogenous signaling molecule hydrogen sulfide (H2S), and so contributes to the regulation of blood pressure. Acts as a cysteine-protein sulfhydrase by mediating sulfhydration of target proteins: sulfhydration consists of converting -SH groups into -SSH on specific cysteine residues of target proteins such as GAPDH, PTPN1 and NF-kappa-B subunit RELA, thereby regulating their function.
Research Articles on CTH	**1.** MicroRNA-186 promotes macrophage lipid accumulation and pro-inflammatory cytokine secretion by targeting cystathionine gamma-lyase in THP-1 macrophages
Precautions	All of MyBioSource's Products are for scientific laboratory research purposes and are not for diagnostic, therapeutics, prophylactic or in vivo use. Through your purchase, you expressly represent and warrant to MyBioSource that you will properly test and use any Products purchased from MyBioSource in accordance with industry standards. MyBioSource and its authorized distributors reserve the right to refuse to process any order where we reasonably believe that the intended use will fall outside of our acceptable guidelines.

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