For Research Use Only

CoraLite®594-conjugated Gamma Cystathionase Polyclonal antibody

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Antibodies | ELISA kits | Proteins
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Catalog Number:CL594-12217 Featured Product

Basic Information

Catalog Number:
CL594-12217

Size:
100ul , Concentration: 1000 μg/ml by Nanodrop;

Source:
Rabbit

Isotype:
IgG

Immunogen Catalog Number:
AG2872

GenBank Accession Number:
BC015807

GeneID (NCBI):
1491

UNIPROT ID:
P32929

Full Name:
cystathionase (cystathionine gamma-lyase)

Calculated MW:
405 aa, 45 kDa

Observed MW:
40-45 kDa

Purification Method:
Antigen affinity purification

Recommended Dilutions:
IF-P 1:50-1:500

Excitation/Emission maxima wavelengths:
588 nm / 604 nm

Applications

Tested Applications:
IF-P, FC (Intra)

Species Specificity:
human, mouse, rat

Positive Controls:

IF-P : human liver cancer tissue,

Background Information

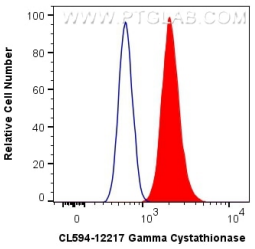
CTH, also named as Gamma-cystathionase and CSE, belongs to the transsulfuration enzymes family. It catalyzes the last step in the transsulfuration pathway from methionine to cysteine. CTH converts two cysteine molecules to lanthionine and hydrogen sulfide. CTH can also accept homocysteine as substrate. It specificity depends on the levels of the endogenous substrates. CTH is the major H2S-producing enzyme in kidney, liver, vascular smooth muscle cells and enterocytes. The endogenous production of H2S plays a significant role in the regulation of cellular functions, including cell growth, hyperpolarization of cell membranes, modulation of neuronal excitability and relaxation of smooth muscle cells. The CSE/H2S pathway is upregulated in the heart in a murine model of CVB3-induced myocarditis and that inhibition of endogenous H2S is beneficial to treatment early in the disease while administration of exogenous H2S is protective to infected myocardium during the later stage. Mutations in the gene encoding CTH can result in the autosomal recessive disease cystathioninuria; a disorder characterized by the unusual accumulation of plasma cystathionine causing increased urinary excretion. Both male and female CTH-null mice showed hypercystathioninemia and hyperhomocysteinemia, but not hypermethioninemia. CSE has also been reported to be expressed in endothelial cells and contribute to endothelium-dependent vasorelaxation. It can be detected a minor 36 kDa band probably representing a degradative intermediate except the major 43 kDa band in vitamin B6-deficient rat liver(PMID:8660672). CTH also can be detected as ~70kD in rat liver (PMID: 18974309). This antibody is a rabbit polyclonal antibody raised against residues near the C terminus of human CTH.

Storage

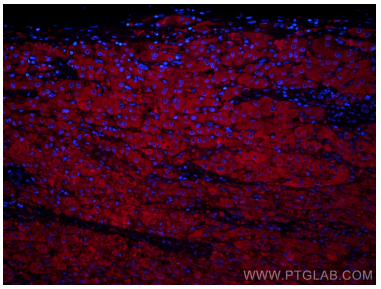
Storage:
Store at -20°C. Avoid exposure to light. Stable for one year after shipment.
Storage Buffer:
PBS with 50% Glycerol, 0.05% Proclin300, 0.5% BSA, pH 7.3.
Aliquoting is unnecessary for -20°C storage

For technical support and original validation data for this product please contact:
T: 1 (888) 4PTGLAB (1-888-478-4522) (toll free in USA), or 1(312) 455-8498 (outside USA)
E: proteintech@ptglab.com
W: ptglab.com

Selected Validation Data



1X10^6 MCF-7 cells were intracellularly stained with 0.8 ug CoraLite®594 Anti-Human Gamma Cystathionase (CL594-12217) (red), or 0.8 ug Control Antibody. Cells were fixed with 4% PFA and permeabilized with Flow Cytometry Perm Buffer (PF00011-C).



Immunofluorescent analysis of (4% PFA) fixed human liver cancer tissue using CoraLite®594 Gamma Cystathionase antibody (CL594-12217) at dilution of 1:200.