

For Research Use Only

# Gamma Cystathionase Monoclonal antibody



Catalog Number: 60234-1-Ig

Featured Product

26 Publications

## Basic Information

<b>Catalog Number:</b> 60234-1-Ig	<b>GenBank Accession Number:</b> BC015807	<b>Purification Method:</b> Protein A purification
<b>Size:</b> 150ul, Concentration: 1700 µg/ml by Nanodrop and 1000 µg/ml by Bradford method using BSA as the standard;	<b>GeneID (NCBI):</b> 1491	<b>CloneNo.:</b> 2C7F9
<b>Source:</b> Mouse	<b>UNIPROT ID:</b> P32929	<b>Recommended Dilutions:</b> WB 1:5000-1:50000 IHC 1:200-1:800 IF 1:20-1:200
<b>Isotype:</b> IgG1	<b>Full Name:</b> cystathionase (cystathionine gamma-lyase)	
<b>Immunogen Catalog Number:</b> AG2872	<b>Calculated MW:</b> 405 aa, 45 kDa	
	<b>Observed MW:</b> 40-45 kDa	

## Applications

### Tested Applications:

WB, IF, IHC, ELISA

### Cited Applications:

WB, IF, IHC

### Species Specificity:

human, mouse, rat

### Cited Species:

human, rat, mouse, canine

### Positive Controls:

WB: LNCaP cells, HSC-T6 cells, PC-3 cells, HEK-293 cells, HeLa cells, A431 cells, NIH/3T3 cells, HepG2 cells, K-562 cells

IHC: human lung cancer tissue, human liver cancer tissue

IF: HepG2 cells,

**Note-IHC: suggested antigen retrieval with TE buffer pH 9.0; (\*) Alternatively, antigen retrieval may be performed with citrate buffer pH 6.0**

## 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. Its specificity depends on the levels of the endogenous substrates. CTH is the major H<sub>2</sub>S-producing enzyme in kidney, liver, vascular smooth muscle cells and enterocytes. The endogenous production of H<sub>2</sub>S 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/H<sub>2</sub>S pathway is upregulated in the heart in a murine model of CVB3-induced myocarditis and that inhibition of endogenous H<sub>2</sub>S is beneficial to treatment early in the disease while administration of exogenous H<sub>2</sub>S 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).

## Notable Publications

Author	Pubmed ID	Journal	Application
Lara Testai	27616550	Pharmacol Res	WB
Xubo Chen	29038536	Sci Rep	WB
Elisabetta Panza	35605291	Biomed Pharmacother	WB

## Storage

### Storage:

Store at -20°C. Stable for one year after shipment.

### Storage Buffer:

PBS with 0.02% sodium azide and 50% glycerol pH 7.3.

Aliquoting is unnecessary for -20°C storage

\*\*\* 20ul sizes contain 0.1% BSA

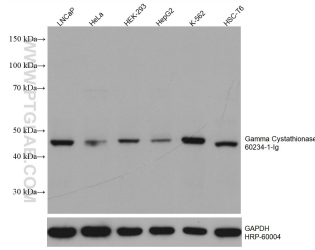
For technical support and original validation data for this product please contact:

T: 1 (888) 4PTGLAB (1-888-478-4522) (toll free in USA), or 1(312) 455-8498 (outside USA)

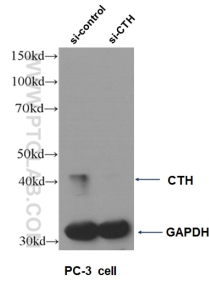
E: proteintech@ptglab.com  
W: ptglab.com

This product is exclusively available under Proteintech Group brand and is not available to purchase from any other manufacturer.

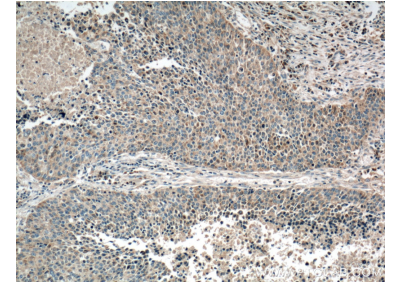
## Selected Validation Data



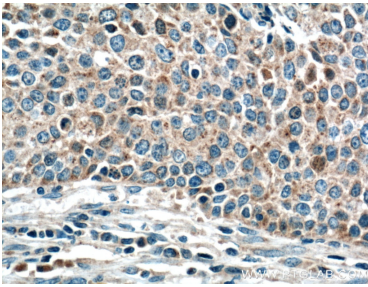
Various lysates were subjected to SDS PAGE followed by western blot with 60234-1-Ig (Gamma Cystathionase antibody) at dilution of 1:10000 incubated at room temperature for 1.5 hours. The membrane was stripped and reblotted with HRP-conjugated GAPDH Monoclonal antibody (HRP-60004) as loading control.



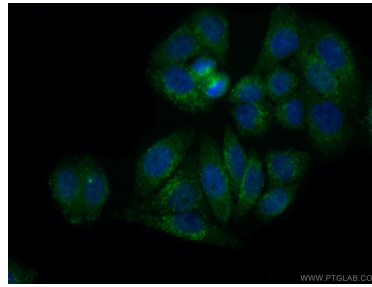
WB result of CTH antibody (60234-1-Ig, 1:500) with si-control and si-CTH transfected PC-3 cells.



Immunohistochemical analysis of paraffin-embedded human lung cancer tissue slide using 60234-1-Ig (Gamma cystathionase antibody at dilution of 1:400 (under 10x lens). Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0).



Immunohistochemical analysis of paraffin-embedded human lung cancer tissue slide using 60234-1-Ig (Gamma cystathionase antibody at dilution of 1:400 (under 40x lens). Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0).



Immunofluorescent analysis of (10% Formaldehyde) fixed HepG2 cells using 60234-1-Ig (Gamma cystathionase antibody) at dilution of 1:50 and Alexa Fluor 488-conjugated AffiniPure Goat Anti-Mouse IgG(H+L).