

For Research Use Only

Gamma Cystathionase Monoclonal antibody



Catalog Number: 60234-1-Ig

Featured Product

8 Publications

Basic Information

Catalog Number: 60234-1-Ig	GenBank Accession Number: BC015807	Purification Method: Protein G purification
Size: 150UL, Concentration: 1000 µg/ml by Bradford method using BSA as the standard;	GeneID (NCBI): 1491	CloneNo.: 2C7F9
Source: Mouse	Full Name: cystathionase (cystathionine gamma- lyase)	Recommended Dilutions: WB 1:2000-1:6000 IHC 1:200-1:800 IF 1:20-1:200
Isotype: IgG1	Calculated MW: 405 aa, 45 kDa	
Immunogen Catalog Number: AG2872	Observed MW: 40-45 kDa	

Applications

Tested Applications:

IF, IHC, WB, ELISA

Cited Applications:

IF, WB

Species Specificity:

human, mouse, rat

Cited Species:

canine, human, mouse, rat

Positive Controls:

WB : HSC-T6 cells, PC-3 cells, HEK-293 cells, HeLa cells,
A431 cells, HepG2 cells, NIH/3T3 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 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).

Notable Publications

Author	Pubmed ID	Journal	Application
Xubo Chen	29038536	Sci Rep	WB
Liren Zhong	32215177	Oxid Med Cell Longev	WB,IF
Sona Cacanyiova	32585916	Molecules	IF

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

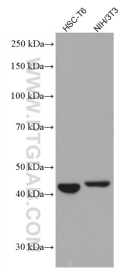
For technical support and original validation data for this product please contact:

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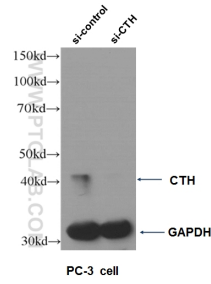
E: proteintech@ptglab.com
W: ptglab.com

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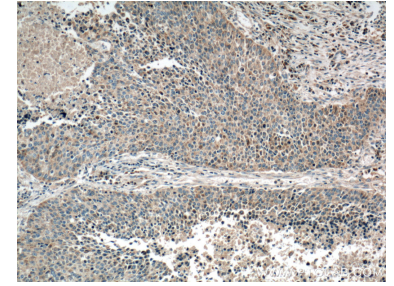
Selected Validation Data



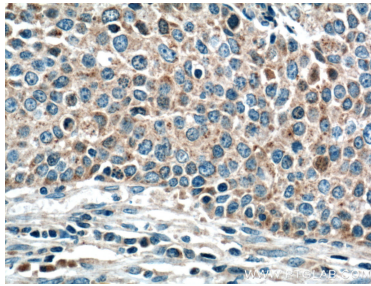
Various lysates were subjected to SDS PAGE followed by western blot with 60234-1-Ig (Gamma cystathionase antibody) at dilution of 1:5000 incubated at room temperature for 1.5 hours.



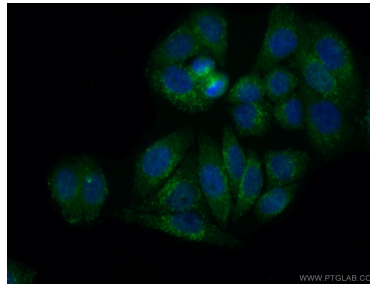
WB result of CTH antibody (60234-1-Ig, 1:500) with si-control and si-CTH transfected PC-3 cells.



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).