

For Research Use Only

Gamma Cystathionase Monoclonal antibody, PBS Only



Catalog Number: 60234-1-PBS

Featured Product

Basic Information

Catalog Number:

60234-1-PBS

Size:

1 mg/ml

Source:

Mouse

Isotype:

IgG1

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:

Protein A purification

CloneNo.:

2C7F9

Applications

Tested Applications:

WB, Indirect ELISA, IHC, IF

Species Specificity:

human, mouse, rat

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 as 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).

Storage

Storage:

Store at -80°C.

Storage Buffer:

PBS Only

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

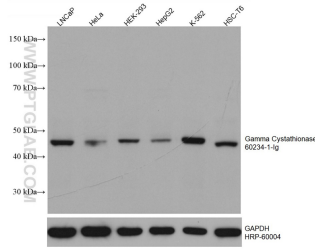
T: 4006900926

E: Proteintech-CN@ptglab.com

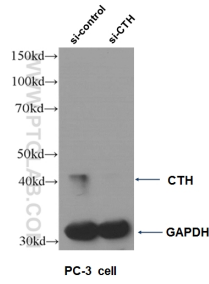
W: ptgcn.com

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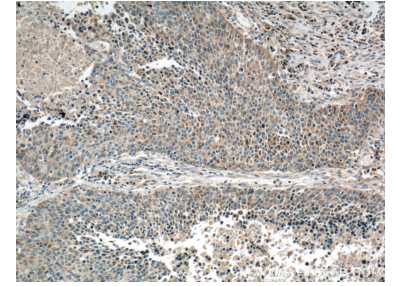
Selected Validation Data



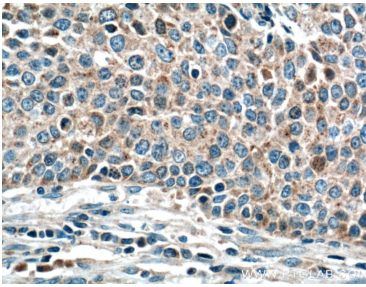
Various lysates were subjected to SDS PAGE followed by western blot with 60234-1-Ig (Gamma Cystathionase antibody) at dilution of 1:10000 incubated at room temperature for 1.5 hours. The membrane was stripped and reblotted with HRP-conjugated GAPDH Monoclonal antibody (HRP-60004) as loading control. This data was developed using the same antibody clone with 60234-1-PBS in a different storage buffer formulation.



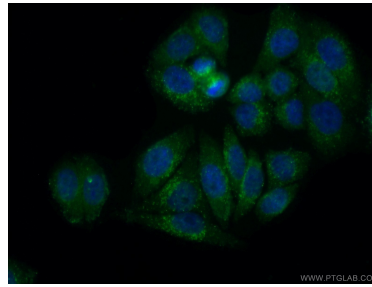
WB result of CTH antibody (60234-1-Ig, 1:500) with si-control and si-CTH transfected PC-3 cells. This data was developed using the same antibody clone with 60234-1-PBS in a different storage buffer formulation.



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). This data was developed using the same antibody clone with 60234-1-PBS in a different storage buffer formulation.



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). This data was developed using the same antibody clone with 60234-1-PBS in a different storage buffer formulation.



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). This data was developed using the same antibody clone with 60234-1-PBS in a different storage buffer formulation.