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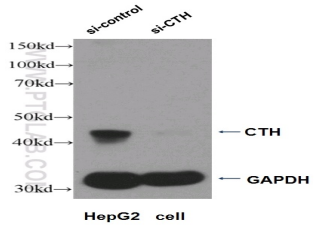
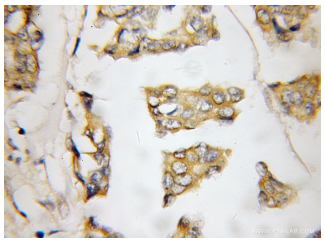
Gamma cystathionase Polyclonal Antibody

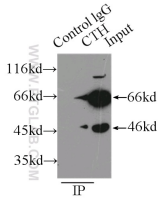
Catalog number: 12217-1-AP
Size: 52 µg/150 µl
Source: Rabbit
Isotype: IgG
Synonyms:
CTH; CSE, CTH, Cystathionine gamma lyase, Gamma cystathionase



WB result of CTH antibody (12217-1-AP, 1:500) with si-control and si-CTH transfected HepG2 cell.



Immunohistochemical of paraffin-embedded human breast cancer using 12217-1-AP(CSE antibody) at dilution of 1:50 (under 10x lens)



IP Result of anti-CSE (IP:12217-1-AP, 3ug; Detection:12217-1-AP 1:1000) with HEK-293 cells lysate 2700ug.

Background

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). This antibody is a rabbit polyclonal antibody raised against residues near the C terminus of human CTH.

Applications

Tested applications:	**ELISA, IHC, IP, WB, FC**
Cited applications:	**IF, WB**
Species specificity:	**Human,Mouse,Rat; other species not tested.**
Cited species:	**Human, mouse, Rabbit, rat**
Caculated Gamma cystathionase MW:	**405aa,45 kDa**
Observed Gamma cystathionase MW:	**43-45 kDa,66-70 kDa**
Positive WB detected in	**Mouse liver tissue, HepG2 cells, mouse heart tissue, rat heart tissue, rat liver tissue**
Positive IP detected in	**HEK-293 cells**
Positive IHC detected in	**Human breast cancer tissue, human kidney tissue**
Positive FC detected in	**MCF-7 cells**
Recommended dilution:	**WB: 1:500-1:5000** **IP: 1:500-1:5000** **IHC: 1:20-1:200** **FC: N/A**

Application key: WB = Western blotting, IHC= Immunohistochemistry, IF = Immunofluorescence, IP = Immunoprecipitation

Immunogen information

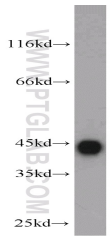
Immunogen:	**Ag2872**
GenBank accession number:	**BC015807**
Gene ID (NCBI):	**1491**

Full name: **Cystathionase (cystathionine gamma-lyase)**

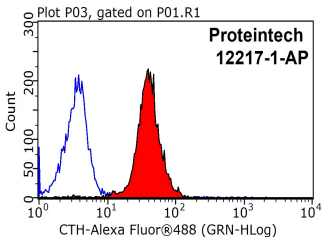
Product information

Purification method: **Antigen affinity purification**

Storage: **PBS with 0.1% sodium azide and 50% glycerol pH 7.3. Store at -20°C.**



mouse liver tissue were subjected to SDS PAGE followed by western blot with 12217-1-AP(CSE antibody) at dilution of 1:1000



1X10^6 MCF-7 cells were stained with 0.2ug CSE antibody (12217-1-AP, red) and control antibody (blue). Fixed with 90% MeOH blocked with 3% BSA (30 min). Alexa Fluor 488-congugated AffiniPure Goat Anti-Rabbit IgG(H+L) with dilution 1:1500.