

Anti-Cystathionase/CTH Antibody

Catalog Number: PA1556

About CTH

Cystathionine gamma-lyase (or cystathionase) is an enzyme which breaks down cystathionine into cysteine and alpha-ketobutyrate. The International Radiation Hybrid Mapping Consortium mapped the CTH gene to chromosome 1. The CTH gene had earlier been assigned to chromosome 16 by study of somatic cell hybrids. It is demonstrated that hydrogen sulfide (H₂S) is physiologically generated by CTH.

Overview

| | |
|----------------------|---|
| Product Name | Anti-Cystathionase/CTH Antibody |
| Reactive Species | Human, Mouse, Rat |
| Description | Boster Bio Anti-Cystathionase/CTH Antibody catalog # PA1556. Tested in Flow Cytometry, IF, ICC, WB applications. This antibody reacts with Human, Mouse, Rat. |
| Application | Flow Cytometry, IF, ICC, WB |
| Clonality | Polyclonal |
| Formulation | Each vial contains 4mg Trehalose, 0.9mg NaCl and 0.2mg Na ₂ HPO ₄ . |
| Storage Instructions | Store at -20°C for one year from date of receipt. After reconstitution, at 4°C for one month. It can also be aliquotted and stored frozen at -20°C for six months. Avoid repeated freeze-thaw cycles. |
| Host | Rabbit |
| Uniprot ID | P32929 |

Technical Details

| | |
|-------------------------------|---|
| Immunogen | A synthetic peptide corresponding to a sequence at the C-terminus of human Cystathionase, different from the related mouse and rat sequences by two amino acids. |
| Predicted Reactive Species | Rabbit |
| Recommended Detection Systems | Boster recommends Enhanced Chemiluminescent Kit with anti-Rabbit IgG (EK1002) for Western blot, and HRP Conjugated anti-Rabbit IgG Super Vision Assay Kit (SV0002-1) for ICC. |
| Cross Reactivity | No cross-reactivity with other proteins |
| Isotype | Rabbit IgG |
| Form | Lyophilized |
| Concentration | Adding 0.2 ml of distilled water will yield a concentration of 500 ug/ml. |
| Purification | Immunogen affinity purified. |

Suggested Dilutions

Dilute the sample so that the expected range of concentrations fall within the detection range of this kit.

If the expected range of concentration is unknown, a pilot test should be conducted to decide the optimal dilution ratio for your samples.

Some PubMed article(s) citing the expression level of this target are as follows:

Boster Bio's internal QC testing used:

Western blot, 0.1-0.5ug/ml, Human, Mouse, Rat

Immunocytochemistry/Immunofluorescence, 5 ug/ml, Human

Flow Cytometry, 1-3 ug/1x10⁶ cells, Human

Anti-Cystathionase/CTH Antibody (PA1556) Images

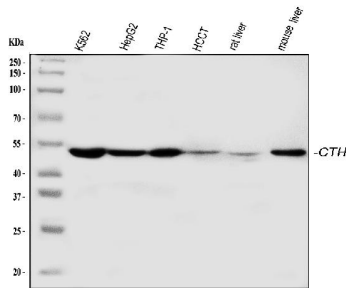


Figure 1. Western blot analysis of CTH using anti-CTH antibody (PA1556).
Electrophoresis was performed on a 5-20% SDS-PAGE gel at 70V (Stacking gel) / 90V (Resolving gel) for 2-3 hours. The sample well of each lane was loaded with 30 ug of sample under reducing conditions.
Lane 1: human K562 whole cell lysates,
Lane 2: human HepG2 whole cell lysates,
Lane 3: human THP-1 whole cell lysates,
Lane 4: human HCCT tissue lysates,
Lane 5: rat liver tissue lysates,
Lane 6: mouse liver tissue lysates.
After electrophoresis, proteins were transferred to a nitrocellulose membrane at 150 mA for 50-90 minutes. Blocked the membrane with 5% non-fat milk/TBS for 1.5 hour at RT. The membrane was incubated with rabbit anti-CTH antigen affinity purified polyclonal antibody (Catalog # PA1556) at 0.5 ug/mL overnight at 4°C, then washed with TBS-0.1%Tween 3 times with 5 minutes each and probed with a goat anti-rabbit IgG-HRP secondary antibody at a dilution of 1:5000 for 1.5 hour at RT. The signal is developed using an Enhanced Chemiluminescent detection (ECL) kit (Catalog # EK1002) with Tanon 5200 system. A specific band was detected for CTH at approximately 45 kDa. The expected band size for CTH is at 45 kDa.

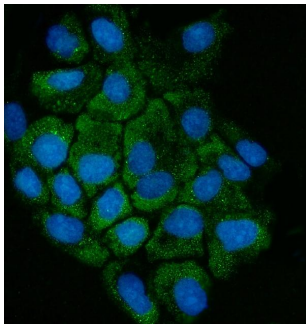


Figure 2. IF analysis of CTH using anti-CTH antibody (PA1556).
CTH was detected in an immunocytochemical section of A431 cells. Enzyme antigen retrieval was performed using IHC enzyme antigen retrieval reagent (AR0022) for 15 mins. The cells were blocked with 10% goat serum. And then incubated with 5 ug/mL rabbit anti-CTH Antibody (PA1556) overnight at 4°C. DyLight®488 Conjugated Goat Anti-Rabbit IgG (BA1127) was used as secondary antibody at 1:100 dilution and incubated for 30 minutes at 37°C. The section was counterstained with DAPI. Visualize using a fluorescence microscope and filter sets appropriate for the label used.

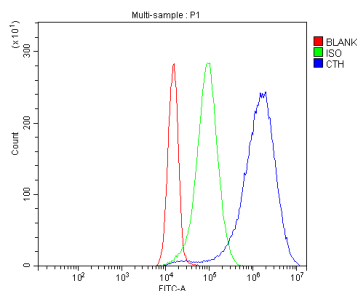


Figure 3. Flow Cytometry analysis of JK cells using anti-CTH antibody (PA1556).
Overlay histogram showing JK cells stained with PA1556 (Blue line). The cells were blocked with 10% normal goat serum. And then incubated with rabbit anti-CTH Antibody (PA1556, 1 ug/1x10⁶ cells) for 30 min at 20°C. DyLight®488 conjugated goat anti-rabbit IgG (BA1127, 5-10 ug/1x10⁶ cells) was used as secondary antibody for 30 minutes at 20°C. Isotype control antibody (Green line) was rabbit IgG (1 ug/1x10⁶) used under the same conditions. Unlabelled sample (Red line) was also used as a control.

1. PubMed ID: 26378818, Caffeic Acid Phenethyl Ester inhibit Hepatic Fibrosis by Nitric Oxide Synthase and Cystathionine Gamma-Lyase in Rats
2. PubMed ID: 29393353, Hydrogen sulfide attenuates myocardial fibrosis in diabetic rats through the JAK/STAT signaling pathway
3. PubMed ID: 26668593, Endogenous carbon monoxide downregulates hepatic cystathionine- γ -lyase in rats with liver cirrhosis

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