

# Anti-Cystathionase Rabbit Monoclonal Antibody

Catalog # ABO15717

## Product Information

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|--------------------------|-----------------------------------------------------------------------------------------------------------------|
| <b>Application</b>       | WB, IP                                                                                                          |
| <b>Primary Accession</b> | <a href="#">P32929</a>                                                                                          |
| <b>Host</b>              | Rabbit                                                                                                          |
| <b>Isotype</b>           | IgG                                                                                                             |
| <b>Reactivity</b>        | Human                                                                                                           |
| <b>Clonality</b>         | Monoclonal                                                                                                      |
| <b>Format</b>            | Liquid                                                                                                          |
| <b>Description</b>       | Anti-Cystathionase Rabbit Monoclonal Antibody . Tested in WB, IP applications. This antibody reacts with Human. |

## Additional Information

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|----------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Gene ID</b>                         | 1491                                                                                                                                                              |
| <b>Other Names</b>                     | Cystathionine gamma-lyase, CGL, CSE, 4.4.1.1, Cysteine desulfhydrase, Cysteine-protein sulfhydrase, Gamma-cystathionase, Homocysteine desulfhydrase, 4.4.1.2, CTH |
| <b>Calculated MW</b>                   | 44508                                                                                                                                                             |
| <b>Application Details</b>             | WB 1:1000-1:5000<br>IP 1:50                                                                                                                                       |
| <b>Source</b>                          | Eukaryota                                                                                                                                                         |
| <b>Contents</b>                        | Rabbit IgG in phosphate buffered saline, pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol, 0.4-0.5mg/ml BSA.                                               |
| <b>Clone Names</b><br><b>Immunogen</b> | Clone: 22C93<br>A synthesized peptide derived from human Cystathionase                                                                                            |
| <b>Purification</b>                    | Affinity-chromatography                                                                                                                                           |
| <b>Storage</b>                         | Store at -20°C for one year. For short term storage and frequent use, store at 4°C for up to one month. Avoid repeated freeze-thaw cycles.                        |

## Protein Information

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| <b>Name</b>     | CTH                                                                                                                                                                                                                             |
| <b>Function</b> | Catalyzes the last step in the trans-sulfuration pathway from L-methionine to L-cysteine in a pyridoxal-5'-phosphate (PLP)-dependent manner, which consists on cleaving the L,L-cystathionine molecule into L-cysteine, ammonia |

and 2-oxobutanoate (PubMed:[10212249](#), PubMed:[18476726](#), PubMed:[19261609](#), PubMed:[19961860](#)). Part of the L- cysteine derived from the trans-sulfuration pathway is utilized for biosynthesis of the ubiquitous antioxidant glutathione (PubMed:[18476726](#)). Besides its role in the conversion of L- cystathionine into L-cysteine, it utilizes L-cysteine and L- homocysteine as substrates (at much lower rates than L,L-cystathionine) to produce the endogenous gaseous signaling molecule hydrogen sulfide (H<sub>2</sub>S) (PubMed:[10212249](#), PubMed:[19019829](#), PubMed:[19261609](#), PubMed:[19961860](#)). In vitro, it converts two L-cysteine molecules into lanthionine and H<sub>2</sub>S, also two L-homocysteine molecules to homolanthionine and H<sub>2</sub>S, which can be particularly relevant under conditions of severe hyperhomocysteinemia (which is a risk factor for cardiovascular disease, diabetes, and Alzheimer's disease) (PubMed:[19261609](#)). Lanthionine and homolanthionine are structural homologs of L,L-cystathionine that differ by the absence or presence of an extra methylene group, respectively (PubMed:[19261609](#)). Acts as a cysteine-protein sulfhydrase by mediating sulfhydration of target proteins: sulfhydration consists of converting -SH groups into -SSH on specific cysteine residues of target proteins such as GAPDH, PTPN1 and NF-kappa-B subunit RELA, thereby regulating their function (PubMed:[22169477](#)). By generating the gasotransmitter H<sub>2</sub>S, it participates in a number of physiological processes such as vasodilation, bone protection, and inflammation (Probable) (PubMed:[29254196](#)). Plays an essential role in myogenesis by contributing to the biogenesis of H<sub>2</sub>S in skeletal muscle tissue (By similarity). Can also accept homoserine as substrate (By similarity). Catalyzes the elimination of selenocystathionine (which can be derived from the diet) to yield selenocysteine, ammonia and 2-oxobutanoate (By similarity).

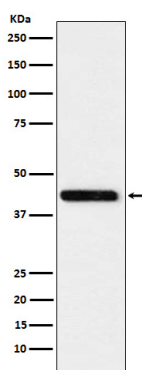
#### Cellular Location

Cytoplasm.

#### Tissue Location

Highly expressed in liver (PubMed:[10727430](#), PubMed:[20305127](#)). Also in muscle and lower expression in most tissues except heart, pituitary gland, spleen, thymus, and vascular tissue, where it is hardly detected (PubMed:[20305127](#))

## Images



Western blot analysis of Cystathionase expression in HeLa cell lysate.

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.