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Anti-Cystathionase Picoband Antibody

Catalog # ABO12182

Specification

Anti-Cystathionase Picoband Antibody - Product Information

Application	**WB**
Primary Accession	P32929
Host	**Rabbit**
Reactivity	**Human, Mouse, Rat**
Clonality	**Polyclonal**
Format	**Lyophilized**

Description
Rabbit IgG polyclonal antibody for Cystathionine gamma-lyase(CTH) detection. Tested with WB in Human;Mouse;Rat.

Reconstitution
Add 0.2ml of distilled water will yield a concentration of 500ug/ml.

Anti-Cystathionase Picoband Antibody - Additional Information

Gene ID 1491

Other Names
Cystathionine gamma-lyase, 4.4.1.1, Cysteine-protein sulfhydrase, Gamma-cystathionase, CTH

Calculated MW
44508 MW KDa

Application Details
Western blot, 0.1-0.5 µg/ml, Mouse, Rat, Human

Subcellular Localization
Cytoplasm.

Protein Name
Cystathionine gamma-lyase

Contents
Each vial contains 5mg BSA, 0.9mg NaCl, 0.2mg Na2HPO4, 0.05mg NaN3.

Immunogen
E.coli-derived human Cystathionase recombinant protein (Position: D181-H398). Human Cystathionase shares 85.8% amino acid (aa) sequence identity with both mouse and rat Cystathionase.

Purification
Immunogen affinity purified.

Cross Reactivity

No cross reactivity with other proteins

Storage	**At -20˚C for one year. After r˚Constitution, at 4˚C for one month. It˚Can also be aliquotted and stored frozen at -20˚C for a longer time.Avoid repeated freezing and thawing.**

Anti-Cystathionase Picoband Antibody - Protein Information

Name CTH

Function
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 (H2S) (PubMed:10212249, PubMed:19019829, PubMed:19261609, PubMed:19961860). In vitro, it converts two L-cysteine molecules into lanthionine and H2S, also two L-homocysteine molecules to homolanthionine and H2S, 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 H2S, 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 H2S 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)

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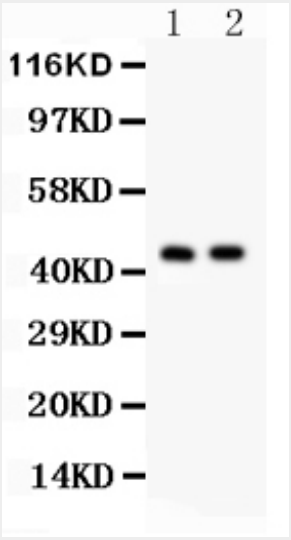
Anti-Cystathionase Picoband Antibody - Protocols

Provided below are standard protocols that you may find useful for product applications.

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

Anti-Cystathionase Picoband Antibody - Images



Anti- Cystathionase Picoband antibody, ABO12182, Western blottingAll lanes: Anti Cystathionase (ABO12182) at 0.5ug/mlLane 1: Rat Liver Tissue Lysate at 50ugLane 2: Mouse Liver Tissue Lysate at 50ugPredicted bind size: 45KDObserved bind size: 45KD

Anti-Cystathionase Picoband Antibody - Background

Cystathionine gamma-lyase (or cystathionase) is an enzyme which breaks down cystathionine into cysteine and Î±-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.