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Anti-Cystathionase Rabbit Monoclonal Antibody

Catalog # ABO15717

Product Information

Application	WB, IP
Primary Accession	P32929
Host	Rabbit
Isotype	IgG
Reactivity	Human
Clonality	Monoclonal
Format	Liquid
Description	Anti-Cystathionase Rabbit Monoclonal Antibody . Tested in WB, IP applications. This antibody reacts with Human.

Additional Information

Gene ID	1491
Other Names	Cystathionine gamma-lyase, CGL, CSE, 4.4.1.1, Cysteine desulfhydrase, Cysteine-protein sulfhydrase, Gamma-cystathionase, Homocysteine desulfhydrase, 4.4.1.2, CTH
Calculated MW	44508
Application Details	WB 1:1000-1:5000 IP 1:50
Source	Eukaryota
Contents	Rabbit IgG in phosphate buffered saline, pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol, 0.4-0.5mg/ml BSA.
Clone Names	Clone: 22C93
Immunogen	A synthesized peptide derived from human Cystathionase
Purification	Affinity-chromatography
Storage	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

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).

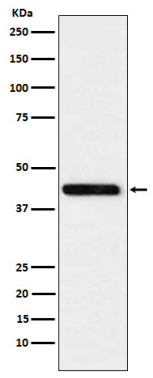
Cellular Location

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)

Images



Western blot analysis of Cystathionase expression in HeLa cell lysate.

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