

Anti-CTH Antibody
Catalog # AP53807**Specification**

Anti-CTH Antibody - Product Information

Application	WB
Primary Accession	P32929
Reactivity	Human, Mouse, Rat
Host	Rabbit
Clonality	Polyclonal
Calculated MW	44508

Anti-CTH Antibody - Additional Information**Gene ID** 1491**Other Names**

Cystathionine gamma-lyase; Cysteine-protein sulfhydrase; Gamma-cystathionase

Target/Specificity

Recognizes endogenous levels of CTH protein.

Dilution

WB~~1/500 - 1/1000

Format

Liquid in 0.42% Potassium phosphate, 0.87% Sodium chloride, pH 7.3, 30% glycerol, and 0.09% (W/V) sodium azide.

Storage

Store at -20 °C.Stable for 12 months from date of receipt

Anti-CTH 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 sulphydrase by mediating sulphydration of target proteins: sulphydration 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

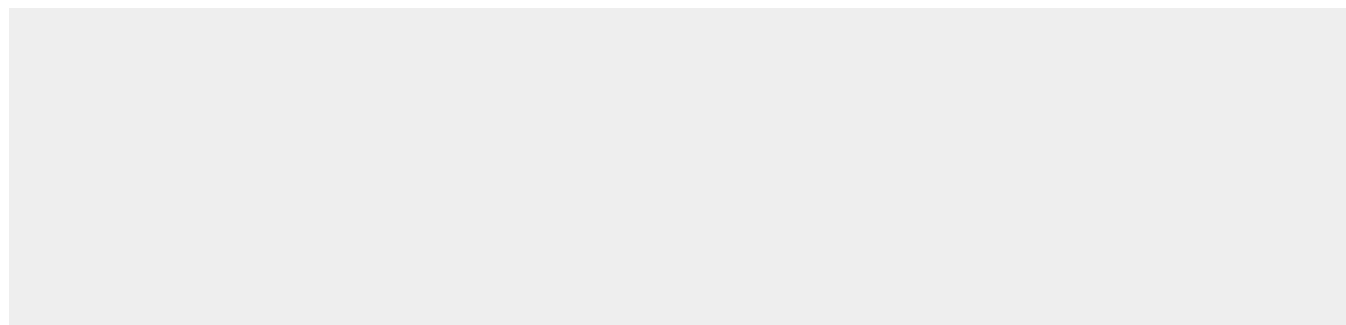
Highly expressed in liver (PubMed:10727430, PubMed:20305127). Also in muscle and lower expression in most tissues except heart, pituitary gland, spleen, thymus, and vascular tissue, where it is hardly detected (PubMed:20305127)

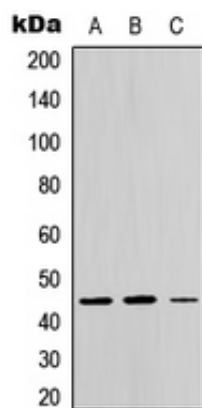
Anti-CTH Antibody - Protocols

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

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

Anti-CTH Antibody - Images





Western blot analysis of CTH expression in HEK293T (A), Raw264.7 (B), PC12 (C) whole cell lysates.

Anti-CTH Antibody - Background

Rabbit polyclonal antibody to CTH