

**CTH antibody - C-terminal region**  
**Rabbit Polyclonal Antibody**  
**Catalog # AI12652****Specification**

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**CTH antibody - C-terminal region - Product Information**

Application	IHC, WB
Primary Accession	<a href="#">P32929</a>
Other Accession	<a href="#">NM_001902</a> , <a href="#">NP_001893</a>
Reactivity	Human, Mouse, Rat, Rabbit, Zebrafish, Pig, Horse, Bovine, Guinea Pig, Dog
Predicted	Human, Rat, Rabbit, Zebrafish, Pig, Chicken, Bovine, Guinea Pig, Dog
Host	Rabbit
Clonality	Polyclonal
Calculated MW	44kDa KDa

**CTH antibody - C-terminal region - Additional Information****Gene ID** 1491**Alias Symbol** MGC9471**Other Names**

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

**Format**

Liquid. Purified antibody supplied in 1x PBS buffer with 0.09% (w/v) sodium azide and 2% sucrose.

**Reconstitution & Storage**

Add 100 ul of distilled water. Final anti-CTH antibody concentration is 1 mg/ml in PBS buffer with 2% sucrose. For longer periods of storage, store at 20°C. Avoid repeat freeze-thaw cycles.

**Precautions**

CTH antibody - C-terminal region is for research use only and not for use in diagnostic or therapeutic procedures.

**CTH antibody - C-terminal region - 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:&lt;a href="http://www.uniprot.org/citations/10212249" target="\_blank"&gt;10212249&lt;/a&gt;, PubMed:&lt;a href="http://www.uniprot.org/citations/18476726" target="\_blank"&gt;18476726&lt;/a&gt;, PubMed:&lt;a href="http://www.uniprot.org/citations/19261609" target="\_blank"&gt;19261609&lt;/a&gt;, PubMed:&lt;a href="http://www.uniprot.org/citations/19961860" target="\_blank"&gt;19961860&lt;/a&gt;). Part of the L-

cysteine derived from the trans-sulfuration pathway is utilized for biosynthesis of the ubiquitous antioxidant glutathione (PubMed:<a href="http://www.uniprot.org/citations/18476726" target="\_blank">18476726</a>). 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:<a href="http://www.uniprot.org/citations/10212249" target="\_blank">10212249</a>, PubMed:<a href="http://www.uniprot.org/citations/19019829" target="\_blank">19019829</a>, PubMed:<a href="http://www.uniprot.org/citations/19261609" target="\_blank">19261609</a>, PubMed:<a href="http://www.uniprot.org/citations/19961860" target="\_blank">19961860</a>). 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:<a href="http://www.uniprot.org/citations/19261609" target="\_blank">19261609</a>). Lanthionine and homolanthionine are structural homologs of L,L-cystathionine that differ by the absence or presence of an extra methylene group, respectively (PubMed:<a href="http://www.uniprot.org/citations/19261609" target="\_blank">19261609</a>). Acts as a cysteine-protein sulfhydrylase by mediating sulfhydrylation of target proteins: sulfhydrylation 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:<a href="http://www.uniprot.org/citations/22169477" target="\_blank">22169477</a>). 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:<a href="http://www.uniprot.org/citations/29254196" target="\_blank">29254196</a>). 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)

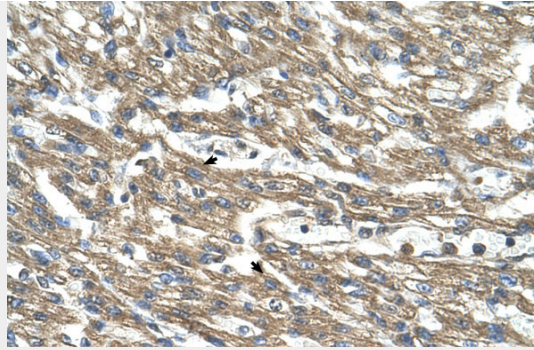
### **CTH antibody - C-terminal region - Protocols**

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

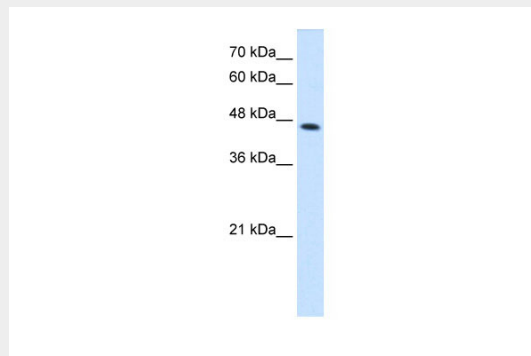
- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

### **CTH antibody - C-terminal region - Images**





Human Heart



WB Suggested Anti-CTH Antibody Titration: 2.5µg/ml  
Positive Control: HepG2 cell lysate

#### CTH antibody - C-terminal region - References

Yang, G., (2004) J. Biol. Chem. 279(47), 49199-49205 Reconstitution and Storage: For short term use, store at 2-8°C up to 1 week. For long term storage, store at -20°C in small aliquots to prevent freeze-thaw cycles. Publications: Anti-CTHARP46068\_T100 has recently been referenced in the following publications: Fernandes, V.S. et al. Endogenous hydrogen sulfide has a powerful role in inhibitory neurotransmission to the pig bladder neck. J. Urol. 189, 1567-73 (2013). 23063804