

CTH antibody - N-terminal region
Rabbit Polyclonal Antibody
Catalog # AI12651**Specification**

CTH antibody - N-terminal region - Product Information

Application	WB
Primary Accession	P32929
Other Accession	NM_001902 , NP_001893
Reactivity	Human, Mouse, Rat, Rabbit, Zebrafish, Pig, Horse, Bovine, Guinea Pig, Dog
Predicted	Human, Rat, Rabbit, Zebrafish, Pig, Bovine, Guinea Pig, Dog
Host	Rabbit
Clonality	Polyclonal
Calculated MW	44kDa kDa

CTH antibody - N-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 50 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 - N-terminal region is for research use only and not for use in diagnostic or therapeutic procedures.

CTH antibody - N-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: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

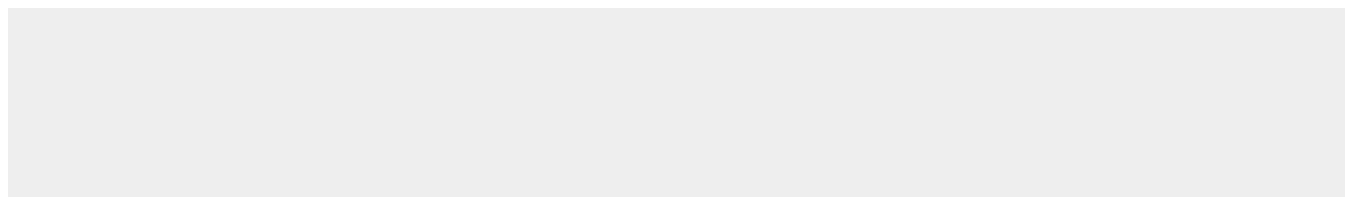
Highly expressed in liver (PubMed:10727430, PubMed:20305127). Also in muscle and lower expression in most tissues except heart, pituitary gland, spleen, thymus, and vascular tissue, where it is hardly detected (PubMed:20305127)

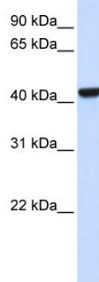
CTH antibody - N-terminal region - Protocols

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 - N-terminal region - Images





WB Suggested Anti-CTH Antibody Titration: 0.2-1 µg/ml

ELISA Titer: 1:312500

Positive Control: Transfected 293T

CTH antibody - N-terminal region - References

Moore, L.E., (2007) Int. J. Cancer 120(11), 2452-2458 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: Porteus, C.S. et al. The role of hydrogen sulphide in the control of breathing in hypoxic zebrafish (*Danio rerio*). J. Physiol. 592, 3075-88 (2014). WB, IHC, Bovine, Human, Dog, Zebrafish, Pig, Rabbit, Mouse, Rat, Guinea pig, Horse 24756639 Kumai, Y., Porteus, C.S., Kwong, R.W.M. & Perry, S.F. Hydrogen sulfide inhibits Na(+) uptake in larval zebrafish, *Danio rerio*. Pflugers Arch. (2014). doi:10.1007/s00424-014-1550-y WB, IHC, Bovine, Human, Dog, Zebrafish, Pig, Rabbit, Mouse, Rat, Guinea pig, Horse 24939700