

**CTH Antibody (monoclonal) (M01)****Mouse monoclonal antibody raised against a full length recombinant CTH.****Catalog # AT1667a****Specification****CTH Antibody (monoclonal) (M01) - Product Information**

Application	WB, E
Primary Accession	<a href="#">P32929</a>
Other Accession	<a href="#">BC015807</a>
Reactivity	Human, Guinea Pig
Host	mouse
Clonality	Monoclonal
Isotype	IgG1 Kappa
Calculated MW	44508

**CTH Antibody (monoclonal) (M01) - Additional Information****Gene ID 1491****Other Names**

Cystathione gamma-lyase, Cysteine-protein sulfhydrylase, Gamma-cystathionase, CTH

**Target/Specificity**

CTH (AAH15807, 1 a.a. ~ 405 a.a) full-length recombinant protein with GST tag. MW of the GST tag alone is 26 KDa.

**Dilution**

WB~~1:500~1000

E~~N/A

**Format**

Clear, colorless solution in phosphate buffered saline, pH 7.2 .

**Storage**

Store at -20°C or lower. Aliquot to avoid repeated freezing and thawing.

**Precautions**

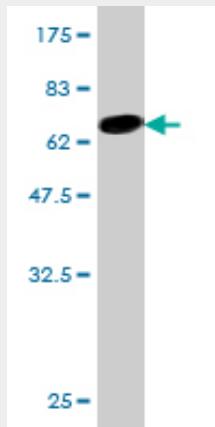
CTH Antibody (monoclonal) (M01) is for research use only and not for use in diagnostic or therapeutic procedures.

**CTH Antibody (monoclonal) (M01) - Protocols**

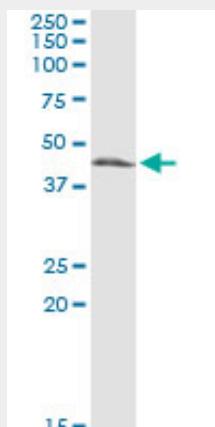
Provided below are standard protocols that you may find useful for product applications.

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)

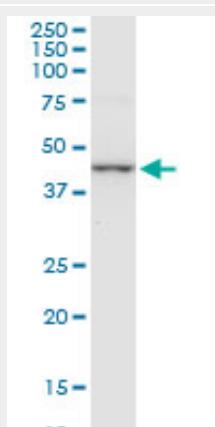
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

**CTH Antibody (monoclonal) (M01) - Images**

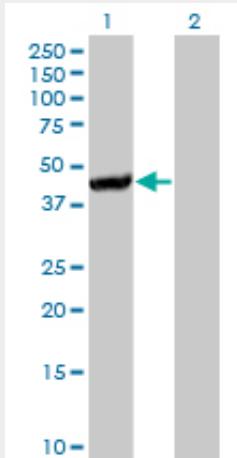
Antibody Reactive Against Recombinant Protein. Western Blot detection against Immunogen (70.07 KDa) .



CTH monoclonal antibody (M01), clone 4E1-1B7. Western Blot analysis of CTH expression in human liver.



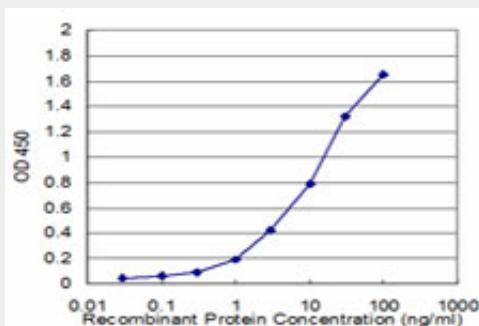
CTH monoclonal antibody (M01), clone 4E1-1B7. Western Blot analysis of CTH expression in HeLa S3 NE.



Western Blot analysis of CTH expression in transfected 293T cell line by CTH monoclonal antibody (M01), clone 4E1-1B7.

Lane 1: CTH transfected lysate (Predicted MW: 44.5 KDa).

Lane 2: Non-transfected lysate.



Detection limit for recombinant GST tagged CTH is approximately 1ng/ml as a capture antibody.

#### **CTH Antibody (monoclonal) (M01) - Background**

This gene encodes a cytoplasmic enzyme in the trans-sulfuration pathway that converts cystathione derived from methionine into cysteine. Glutathione synthesis in the liver is dependent upon the availability of cysteine. Mutations in this gene cause cystathioninuria. Alternative splicing of this gene results in three transcript variants encoding different isoforms.

#### **CTH Antibody (monoclonal) (M01) - References**

- 1.Statins upregulate cystathionine  $\gamma$ -lyase transcription and H2S generation via activating Akt signaling in macrophage.Xu Y, Du HP, Li J, Xu R, Wang YL, You SJ, Liu H, Wang F, Cao YJ, Liu CF, Hu LF.Pharmacol Res. 2014 Jun 18; pii: S1043-6618(14)00098-X.2.Reactive cysteine persulfides and S-polythiolation regulate oxidative stress and redox signaling.Ida T, Sawa T, Ihara H, Tsuchiya Y, Watanabe Y, Kumagai Y, Suematsu M, Motohashi H, Fujii S, Matsunaga T, Yamamoto M, Ono K, Devarie-Baez NO, Xian M, Fukuto JM, Akaike TProc Natl Acad Sci U S A. 2014 May 27;111(21):7606-11. doi: 10.1073/pnas.1321232111. Epub 2014 Apr 14.3.Inhibition of hydrogen sulfide production by gene silencing attenuates inflammatory activity of LPS-activated RAW264.7 cells.Badiei A, Rivers-Auty J, Ang AD, Bhatia MAppl Microbiol Biotechnol. 2013 Jul 10.4.Decreased Endogenous Production of Hydrogen Sulfide Accelerates Atherosclerosis.Mani S, Li H, Untereiner A,

Wu L, Yang G, Austin RC, Dickhout JD, Lhotak S, Meng QH, Wang RCirculation. 2013 May 23.5.Hydrogen sulfide protects against cellular senescence via S-sulfhydration of Keap1 and activation of Nrf2.Yang G, Zhao K, Ju Y, Mani S, Cao Q, Puukila S, Khaper N, Wu L, Wang RAntioxid Redox Signal. 2013 May 20;18(15):1906-19. doi: 10.1089/ars.2012.4645. Epub 2013 Feb 7.6.Is cystathionine gamma-lyase protein expressed in the heart?Fu M, Zhang W, Yang G, Wang R.Biochem Biophys Res Commun. 2012 Oct 30. doi:pii: S0006-291X (12)02076-1. 10.1016/j.bbrc.2012.10.084. [Epub ahead of print]7.Hydrogen Sulfide Inhibits the Translational Expression of Hypoxia-inducible Factor-1 $\alpha$ .Wu B, Teng H, Yang G, Wu L, Wang R.Br J Pharmacol. 2012 Jul 25. doi: 10.1111/j.1476-5381.2012.02113.x.8.Hydrogen sulfide and resolution of acute inflammation: A comparative study utilizing a novel fluorescent probe.Dufton N, Natividad J, Verdu EF, Wallace JL.Sci Rep. 2012;2:499. Epub 2012 Jul 9.9.Hydrogen sulfide producing enzymes in pregnancy and preeclampsia.Holwerda KM, Bos EM, Rajakumar A, Ris-Stalpers C, van Pampus MG, Timmer A, Erwich JJ, Faas MM, van Goor H, Lely AT.Placenta. 2012 Mar 3. [Epub ahead of print]10.Increased neointimal formation in cystathionine gamma-lyase deficient mice: Role of hydrogen sulfide in ?5?]1-integrin and matrix metalloproteinase-2 expression in smooth muscle cells.Yang G, Li H, Tang G, Wu L, Zhao K, Cao Q, Xu C, Wang R.J Mol Cell Cardiol. 2011 Dec 19.11.MicroRNA-21 represses human cystathionine gamma-lyase expression by targeting at specificity protein-1 in smooth muscle cells.Yang G, Pei Y, Cao Q, Wang R.J Cell Physiol. 2011 Oct 27. doi: 10.1002/jcp.24006. [Epub ahead of print]12.Protective Role of Hydrogen Sulfide against Noise-Induced Cochlear Damage: A Chronic Intracochlear Infusion Model.Li X, Mao XB, Hei RY, Zhang ZB, Wen LT, Zhang PZ, Qiu JH, Qiao L.PLoS One. 2011;6(10):e26728. Epub 2011 Oct 26.13.Specificity protein-1 as a critical regulator of human cystathionine gamma-lyase in smooth muscle cells.Yang G, Pei Y, Teng H, Cao Q, Wang R.J Biol Chem. 2011 Jun 9. [Epub ahead of print]14.Hydrogen Sulfide Modulates Contractile Function in Rat Jejunum.Kasperek MS, Linden DR, Farrugia G, Sarr MG.J Surg Res. 2011 Apr 22. [Epub ahead of print]15.Hydrogen sulphide synthesis in the rat and mouse gastrointestinal tract.Martin GR, McKnight GW, Dicay MS, Coffin CS, Ferraz JG, Wallace JL.Dig Liver Dis. 2009 Jun 29. [Epub ahead of print]16.Endogenous and Exogenous Hydrogen Sulfide Promotes Resolution of Colitis in Rats.Wallace JL, Vong L, McKnight W, Dicay M, Martin GR.Gastroenterology. 2009 Aug;137(2):569-78, 578.e1. Epub 2009 Apr 16.17.Hydrogen sulfide from adipose tissue is a novel insulin resistance regulator.Feng X, Chen Y, Zhao J, Tang C, Jiang Z, Geng B.Biochem Biophys Res Commun. 2009 Feb 27;380(1):153-159. Epub 2009 Jan 21.18.Hydrogen sulfide protects rat lung from ischemia-reperfusion injury.Fua Z, Liua X, Geng B, Fanga L, Tang C.Life Sci. 2008 Jun 6;82(23-24):1196-1202. Epub 2008 May 15.19.Hydrogen sulfide enhances ulcer healing in rats.Wallace JL, Dicay M, McKnight W, Martin GR.FASEB J. 2007 Dec;21(14):4070-6. Epub 2007 Jul 18.20.Hydrogen sulfide is a novel prosecretory neuromodulator in the Guinea-pig and human colon.Schicho R, Krueger D, Zeller F, Von Weyhern CW, Frieling T, Kimura H, Ishii I, De Giorgio R, Campi B, Schemann M.Gastroenterology. 2006 Nov;131(5):1542-52. Epub 2006 Aug 18.