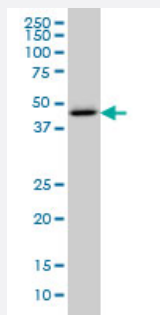


CTH monoclonal antibody (M02), clone 2E12-1C10

Catalog # H00001491-M02

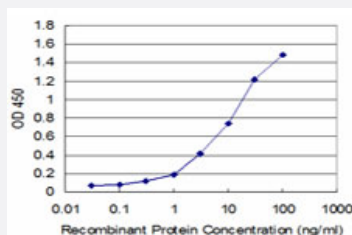
Size 100 ug

Applications



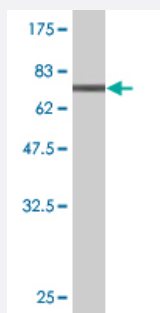
Western Blot (Cell lysate)

CTH monoclonal antibody (M02), clone 2E12-1C10 Western Blot analysis of CTH expression in K-562 (Cat # L009V1).



Sandwich ELISA (Recombinant protein)

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



Western Blot detection against Immunogen (70.07 KDa) .

Specification

Product Description

Mouse monoclonal antibody raised against a full length recombinant CTH.

Immunogen	CTH (AAH15807, 1 a.a. ~ 405 a.a) full-length recombinant protein with GST tag. MW of the GST tag alone is 26 KDa.
Sequence	MQEKDASSQGFLPHFQHFATQAIHVGGDPEQWTSRAVVPPISLSTTFKQGAPGQHSGFEYSRSG NPTRNCLEKAVAALDGAKEYCLAFASGLAATVTITHLLKAGDQIICMDDVYGGTNRYFRQVASEFGL KISFVDCSKIKLLEAAITPETKLWVETPTNPTQKVIDIEGCAHMHKHGDIILVVDNTFMSPYFQRPLA LGADISMYSATKYMNGRSDVVMGLVSVNCESLHNRLRFLQNSLGAVPSPIDCYLCNRGLKTLHVR MEKHFKNGMAVAQFLESNPWVEKVIYPGLPSHPQHELVKRQCTGCTGMVTFYIKGTLQHAEIFLK NLKLFTLAESLGGFESLAELPAIMTHASVLKNDRDVLGISDTLIRLSVGLEDEEDLLEDLDQALKAA HPPSGSHS
Host	Mouse
Reactivity	Human
Isotype	IgG1 Kappa
Quality Control Testing	Antibody Reactive Against Recombinant Protein. Western Blot detection against Immunogen (70.07 KDa) .
Storage Buffer	In 1x PBS, pH 7.4
Storage Instruction	Store at -20°C or lower. Aliquot to avoid repeated freezing and thawing.

Applications

- Western Blot (Cell lysate)

CTH monoclonal antibody (M02), clone 2E12-1C10 Western Blot analysis of CTH expression in K-562 (Cat # L009V1).

[Protocol Download](#)

- Western Blot (Recombinant protein)

[Protocol Download](#)

- Sandwich ELISA (Recombinant protein)

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

[Protocol Download](#)

- ELISA

Gene Info — CTH

Entrez GeneID	1491
GeneBank Accession#	BC015807
Protein Accession#	AAH15807
Gene Name	CTH
Gene Alias	MGC9471
Gene Description	cystathionase (cystathionine gamma-lyase)
Omim ID	219500 607657
Gene Ontology	Hyperlink
Gene Summary	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 two transcript variants encoding different isoforms. [provided by RefSeq]
Other Designations	OTTHUMP00000010945 OTTHUMP00000010946 cystathionase cysteine desulfhydrase gamma-cystathionase homoserine deaminase homoserine dehydratase

Publication Reference

- [Exercise Training Promotes Cardiac Hydrogen Sulfide Biosynthesis and Mitigates Pyroptosis to Prevent High-Fat Diet-Induced Diabetic Cardiomyopathy.](#)

Kar S, Shahshahan HR, Hackfort BT, Yadav SK, Yadav R, Kambis TN, Lefer DJ, Mishra PK.

Antioxidants 2019 Dec; 8(12):638.

Application: WB-Ti, Mouse, Heart

- [Distinctive Expression Pattern of Cystathionine-β-Synthase and Cystathionine-γ-Lyase Identifies Mesenchymal Stromal Cells Transition to Mineralizing Osteoblasts.](#)

Gambari L, Lisignoli G, Gabusi E, Manferdini C, Paoletta F, Piacentini A, Grassi F.

Journal of Cellular Physiology 2017 Jan; [Epub].

Application: ICC, IHC-P, WB, Human, Human bone, Human mesenchymal stromal cells, mature h-osteoblasts

- [Hydrogen Sulfide Is a Novel Regulator of Bone Formation Implicated in the Bone Loss Induced by Estrogen Deficiency.](#)

Grassi F, Malik Tyagi A, Calvert JW, Gambari L, Walker LD, Yu M, Robinson J, Li JY, Lisignoli G, Vaccaro C, Adams J, Pacifici R.

Journal of Bone and Mineral Research 2016 May; 31(5):949.

Application: IHC-P, Human, Tibial plateau

- [Sex-specific dysregulation of cysteine oxidation and the methionine and folate cycles in female cystathionine gamma-lyase null mice: a serendipitous model of the methylfolate trap.](#)

Jiang H, Hurt KJ, Breen K, Stabler SP, Allen RH, Orlicky DJ, Maclean KN.

Biology Open 2015 Aug; 4(9):1154.

Application: WB, Mouse, Liver

- [Integrated stress response modulates cellular redox state via induction of cystathionine \$\gamma\$ -lyase: cross-talk between integrated stress response and thiol metabolism.](#)

Dickhout JG, Carlisle RE, Jerome DE, Mohammed-Ali Z, Jiang H, Yang G, Mani S, Garg SK, Banerjee R, Kaufman RJ, Maclean KN, Wang R, Austin RC.

The Journal of Biological Chemistry 2012 Mar; 287(10):7603.

Application: WB, Mouse, MEFs

- [A novel transgenic mouse model of CBS deficient homocystinuria does not incur hepatic steatosis or fibrosis and exhibits a hypercoagulative phenotype that is ameliorated by betaine treatment.](#)

Maclean KN, Sikora J, Kozich V, Jiang H, Greiner LS, Kraus E, Krijt J, Overdier KH, Collard R, Brodsky GL, Meltesen L, Cnric LS, Allen RH, Stabler SP, Elleder M, Rozen R, Patterson D, Kraus JP.

Molecular Genetics and Metabolism 2010 Oct; 101(2-3):153.

Application: WB-Ti, Mouse, Mouse livers

- [Hydrogen sulfide as a mediator of human corpus cavernosum smooth-muscle relaxation.](#)

d'Emmanuele di Villa Bianca R, Sorrentino R, Maffia P, Mirone V, Imbimbo C, Fusco F, De Palma R, Ignarro LJ, Cirino G.

PNAS 2009 Mar; 106(11):4513.

Application: IHC-P, WB-Ti, Human, Penile tissue, Corpus cavernosum

Pathway

- [Cysteine and methionine metabolism](#)
- [Glycine](#)
- [Metabolic pathways](#)
- [Nitrogen metabolism](#)
- [Selenoamino acid metabolism](#)

Disease

- [Atherosclerosis](#)

- [Calcinosis](#)
- [Cardiovascular Diseases](#)
- [Carotid Stenosis](#)
- [Cleft Lip](#)
- [Cleft Palate](#)
- [Coronary Artery Disease](#)
- [Diabetes Mellitus](#)
- [Edema](#)
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- [Infertility](#)
- [Lung Neoplasms](#)
- [Pulmonary Disease](#)
- [Spinal Dysraphism](#)
- [Urinary Bladder Neoplasms](#)
- [Werner syndrome](#)