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GCLC Antibody (monoclonal) (M01)

Mouse monoclonal antibody raised against a partial recombinant GCLC.
Catalog # AT2176a

Product Information

Application	WB, IF, E
Primary Accession	P48506
Other Accession	NM_001498
Reactivity	Human, Mouse, Rat
Host	mouse
Clonality	monoclonal
Isotype	IgG1 Kappa
Clone Names	3H1
Calculated MW	72766

Additional Information

Gene ID	2729
Other Names	Glutamate--cysteine ligase catalytic subunit, GCS heavy chain, Gamma-ECS, Gamma-glutamylcysteine synthetase, GCLC, GLCL, GLCLC
Target/Specificity	GCLC (NP_001489, 528 a.a. ~ 637 a.a) partial recombinant protein with GST tag. MW of the GST tag alone is 26 KDa.
Dilution	WB~~1:500~1000 IF~~1:50~200 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	GCLC Antibody (monoclonal) (M01) is for research use only and not for use in diagnostic or therapeutic procedures.

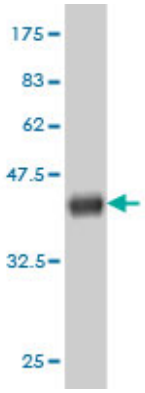
Background

Glutamate-cysteine ligase, also known as gamma-glutamylcysteine synthetase is the first rate limiting enzyme of glutathione synthesis. The enzyme consists of two subunits, a heavy catalytic subunit and a light regulatory subunit. The gene encoding the catalytic subunit encodes a protein of 367 amino acids with a calculated molecular weight of 72.773 kDa and maps to chromosome 6. The regulatory subunit is derived from a different gene located on chromosome 1p22-p21. Deficiency of gamma-glutamylcysteine synthetase in human is associated with enzymopathic hemolytic anemia.

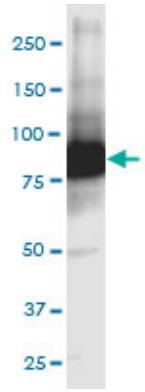
References

1.Prominent steatosis with hypermetabolism of the cell line permissive for years of infection with hepatitis C virus.Sugiyama K, Ebinuma H, Nakamoto N, Sakasegawa N, Murakami Y, Chu PS, Usui S, Ishibashi Y, Wakayama Y, Taniki N, Murata H, Saito Y, Fukasawa M, Saito K, Yamagishi Y, Wakita T, Takaku H, Hibi T, Saito H, Kanai TPLoS One. 2014 Apr 9;9(4):e94460. doi: 10.1371/journal.pone.0094460. eCollection 2014.2.The LEGSKO Mouse: A Mouse Model of Age-Related Nuclear Cataract Based on Genetic Suppression of Lens Glutathione Synthesis.Fan X, Liu X, Hao S, Wang B, Robinson ML, Monnier VM.PLoS One. 2012;7(11):e50832. doi: 10.1371/journal.pone.0050832. Epub 2012 Nov 30.3.Differential activation of the inflammasome in THP-1 cells exposed to chrysotile asbestos and Libby"six-mix"amphiboles and subsequent activation of BEAS-2B cells.Li M, Gunter ME, Fukagawa NK.Cytokine. 2012 Sep 24. pii: S1043-4666(12)00666-7. doi: 10.1016/j.cyto.2012.08.025.4.Protection against 2-chloroethyl ethyl sulfide (CEES) - Induced cytotoxicity in human keratinocytes by an inducer of the glutathione detoxification pathway.Abel EL, Bubel JD, Simper MS, Powell L, McClellan SA, Andreeff M, Macleod MC, Digiovanni J.Toxicol Appl Pharmacol. 2011 Jun 23. [Epub ahead of print]5.Diversity in Antioxidant Response Enzymes in Progressive Stages of Human Nonalcoholic Fatty Liver Disease.Hardwick RN, Fisher CD, Canet MJ, Lake AD, Cherrington NJ.Drug Metab Dispos. 2010 Dec;38(12):2293-301. Epub 2010 Aug 30.

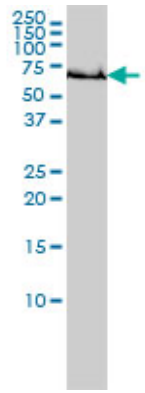
Images



Antibody Reactive Against Recombinant Protein.Western Blot detection against Immunogen (37.84 KDa) .

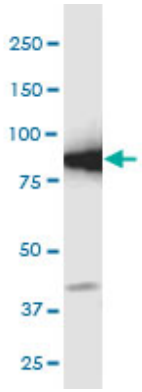


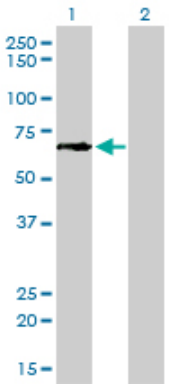
GCLC monoclonal antibody (M01), clone 3H1. Western Blot analysis of GCLC expression in PC-12.



GCLC monoclonal antibody (M01), clone 3H1 Western Blot analysis of GCLC expression in A-431 ((Cat # AT2176a)

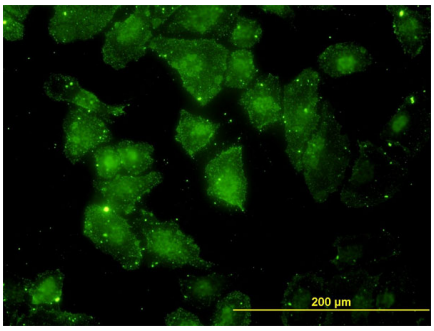
GCLC monoclonal antibody (M01), clone 3H1. Western Blot analysis of GCLC expression in NIH/3T3.



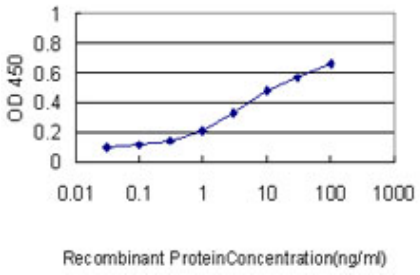


Western Blot analysis of GCLC expression in transfected 293T cell line by GCLC monoclonal antibody (M01), clone 3H1.

Lane 1: GCLC transfected lysate(72.8 KDa).
Lane 2: Non-transfected lysate.



Immunofluorescence of monoclonal antibody to GCLC on HeLa cell. [antibody concentration 10 ug/ml]



Detection limit for recombinant GST tagged GCLC is approximately 0.03ng/ml as a capture antibody.

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.