

GCLC Antibody (N-term)

Affinity Purified Rabbit Polyclonal Antibody (Pab)

Catalog # AP11943a

Product Information

Application	WB, IHC-P, IF, FC, E
Primary Accession	P48506
Other Accession	NP_001489.1
Reactivity	Human
Predicted	Mouse, Rat, Bovine, Canine, Rabbit
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Clone Names	RB31687
Calculated MW	72766
Antigen Region	1-30

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	This GCLC antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 1-30 amino acids from the N-terminal region of human GCLC.
Dilution	WB~~1:1000 IHC-P~~1:100~500 IF~~1:10~50 FC~~1:10~50 E~~Use at an assay dependent concentration.
Format	Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein A column, followed by peptide affinity purification.
Storage	Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.
Precautions	GCLC Antibody (N-term) is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	GCLC (HGNC:4311)
Synonyms	GLCL, GLCLC

Function

Catalyzes the ATP-dependent ligation of L-glutamate and L- cysteine and participates in the first and rate-limiting step in glutathione biosynthesis.

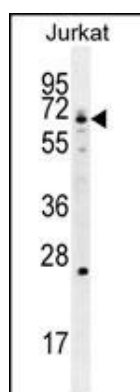
Background

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. This locus encodes the catalytic subunit, while the regulatory subunit is derived from a different gene located on chromosome 1p22-p21. Mutations at this locus have been associated with hemolytic anemia due to deficiency of gamma-glutamylcysteine synthetase and susceptibility to myocardial infarction.

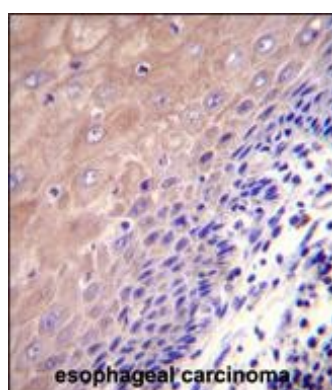
References

Man, B.L., et al. J Clin Neurosci 17(10):1244-1247(2010)
Jia, P., et al. Schizophr. Res. 122 (1-3), 38-42 (2010) :
Le, T.M., et al. Mol. Genet. Metab. 101(1):55-61(2010)
Fullerton, J.M., et al. Bipolar Disord 12(5):550-556(2010)
Wang, X., et al. PLoS ONE 5 (8), E11934 (2010) :

Images

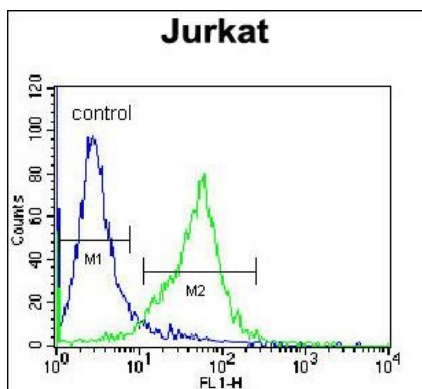
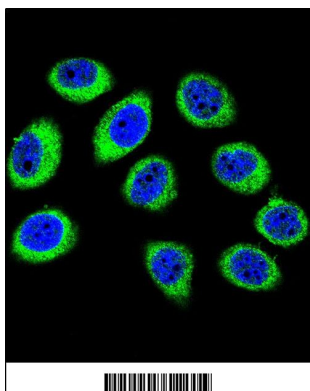


GCLC Antibody (N-term) (Cat. #AP11943a) western blot analysis in Jurkat cell line lysates (35ug/lane). This demonstrates the GCLC antibody detected the GCLC protein (arrow).



GCLC Antibody (N-term) (Cat. #AP11943a) immunohistochemistry analysis in formalin fixed and paraffin embedded human esophageal carcinoma followed by peroxidase conjugation of the secondary antibody and DAB staining. This data demonstrates the use of GCLC Antibody (N-term) for immunohistochemistry. Clinical relevance has not been evaluated.

Confocal immunofluorescent analysis of GCLC Antibody (N-term) (Cat#AP11943a) with U-251MG cell followed by Alexa Fluor 488-conjugated goat anti-rabbit IgG (green). DAPI was used to stain the cell nuclear (blue).



GCLC Antibody (N-term) (Cat. #AP11943a) flow cytometric analysis of Jurkat cells (right histogram) compared to a negative control cell (left histogram). FITC-conjugated donkey-anti-rabbit secondary antibodies were used for the analysis.

Citations

- [The protective role of resveratrol in the sodium arsenite-induced oxidative damage via modulation of intracellular GSH homeostasis.](#)

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