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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.

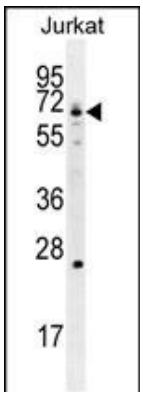
Background

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.

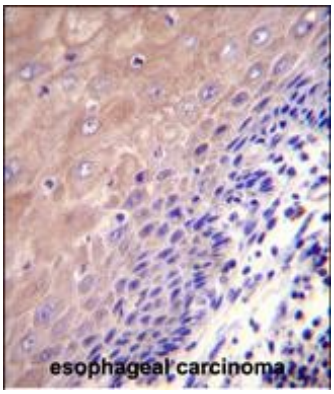
References

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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

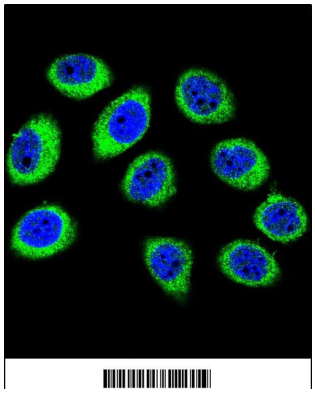


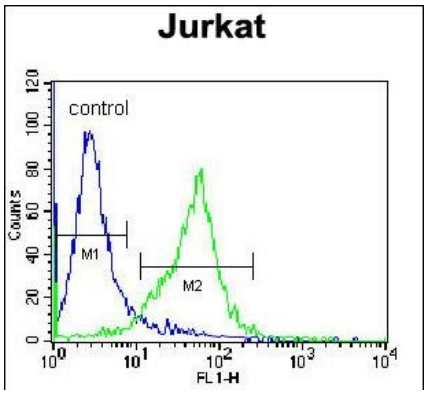
GCLC Antibody (N-term) (Cat. #AP11943a) western blot analysis in Jurkat cell line lysates (35ug/lane).This demonstrates the GCLC antibody detected the GCLC protein (arrow).



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 lgG (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'.