Data Sheet (Cat.No.TMAC-01634)

TargetMol

Anti-Gclc Antibody (9K428)

Product Details

Ig Type:	IgG
Reactivity:	Human,Rat
Conjugation:	Unconjugated
Molecular Weight:	Theoretical: 73 kDa.
Clone:	9K428
Purification:	ProA affinity purified

Applications

Application:	FCM,IHC,WB
Recommended	WB: 1:500-1000; IHC: 1:50-200; FCM: 1:50-100

Properties

Stability & Storage:	Store at -20°C or -80°C for 12 months. Avoid repeated freeze-thaw cycles.
Shipping:	Shipping with blue ice.

Antigen Details

Immunogen:	Recombinant Protein
Uniprot ID:	P48506
Synonyms:	Gamma-ECS;Glutamate--cysteine ligase catalytic subunit;Glclc;Gamma-glutamylcysteine synthetase;Gclc;GCS heavy chain

Research Background

The GCLC gene consists of 16 exons and encodes the 636 amino acid protein g-GCSc (g-glutamylcysteine synthetase heavy subunit), also designated g-L-glutamate-L-cysteine ligase catalytic subunit (GLCLC). g-GCSc is expressed in hemocytes, brain, liver and kidney. g-GCSc associates with a regulatory or modifier subunit, g-GCSm (g-glutamylcysteine synthetase light subunit), to form a heterodimer, g-GCS. g-GCS is the first enzyme involved and the rate determining step in glutathione biosynthesis. Oxidants, cadium and methyl mercury upregulate the transcription of g-GCS. H2O2 regulation depends on the Yap1 protein and the presence of glutamate, glutamine and lysine. Cadium regulates transcription through proteins Met-4, Met-31 and Met-32. Cbf1, a DNA binding protein, inhibits transcription of g-GCS. Chemopreventive compounds cause increased levels of g-GCSc in kidney tissues, which may protect against chemically induced carcinogenesis. A His370Leu amino acid change in g-GCSc causes deficiencies in activity which are responsible for hemolytic anemia and low red blood cell glutathione levels.

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