bs-23393R **[Primary Antibody]**

GCLC Rabbit pAb

www.bioss.com.cn
sales@bioss.com.cn
techsupport@bioss.com.cn
400-901-9800

DATASHEET

Host: Rabbit **Isotype:** IgG

Clonality: Polyclonal

GeneID: 2729 **SWISS:** P48506

Target: GCLC

Immunogen: KLH conjugated synthetic peptide derived from human GCLC: 351-450/637.

Purification: affinity purified by Protein A

Concentration: 1mg/ml

Storage: 0.01M TBS (pH7.4) with 1% BSA, 0.02% Proclin300 and 50% Glycerol.
Shipped at 4°C. Store at -20°C for one year. Avoid repeated freeze/thaw cycles.

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. Defects in GCLC are the cause of hemolytic anemia.

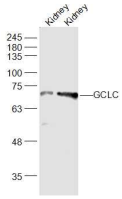
Applications: **WB** (1:500-2000)
IHC-P (1:100-500)
IHC-F (1:100-500)
IF (1:100-500)

Reactivity: Human, Mouse, Rat (predicted: Rabbit, Pig, Cow, Zebrafish, Chicken, Dog, Horse)

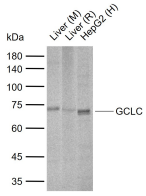
Predicted MW.: 73 kDa

Subcellular Location: Cytoplasm

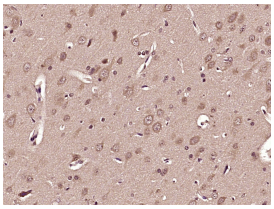
VALIDATION IMAGES



Sample: Kidney (Mouse) Lysate at 40 ug Kidney (Rat) Lysate at 40 ug Primary: Anti-GCLC (bs-23393R) at 1/1000 dilution Secondary: IRDye800CW Goat Anti-Rabbit IgG at 1/20000 dilution Predicted band size: 73 kD Observed band size: 73 kD



Sample: Lane 1: Mouse Liver tissue lysates Lane 2: Rat Liver tissue lysates Lane 3: Human HepG2 cell lysates Primary: Anti-GCLC (bs-23393R) at 1/1000 dilution Secondary: IRDye800CW Goat Anti-Rabbit IgG at 1/20000 dilution Predicted band size: 73 kDa Observed band size: 73 kDa



Paraformaldehyde-fixed, paraffin embedded (Rat brain); Antigen retrieval by boiling in sodium citrate buffer (pH6.0) for 15min; Block endogenous peroxidase by 3% hydrogen peroxide for 20 minutes; Blocking buffer (normal goat serum) at 37°C for 30min; Antibody incubation with (GCLC) Polyclonal Antibody, Unconjugated (bs-23393R) at 1:400 overnight at 4°C, followed by operating according to SP Kit(Rabbit) (sp-0023) instructionsand DAB staining.

SELECTED CITATIONS

- **[IF=8.355]** Shi S et al. Homologous-targeting biomimetic nanoparticles for photothermal therapy and Nrf2-siRNA amplified photodynamic therapy against oral tongue squamous cell carcinoma. Chemical Engineering Journal, 2020, 124268. WB ;Human. doi:10.1016/j.cej.2020.124268
- **[IF=5.6]** Meei-Ling Sheu. et al. Neuronal Death Caused by HMGB1-Evoked via Inflammasomes from Thrombin-Activated Microglia Cells. INT J MOL SCI. 2023 Jan;24(16):12664 WB,IHC ;Rat. 37628850
- **[IF=3.909]** Li ZP et al. Protective roles of Amanita caesarea polysaccharides against Alzheimer's disease via Nrf2 pathway. (2018) Int J Biol Macromol.121:29-37. WB ;Mouse. 30290256
- **[IF=4.253]** Mengru Li. et al. The leaves of Scutellaria baicalensis Georgi attenuate brain aging in D-galactose-induced rats via regulating glutamate metabolism and Nrf2 signaling pathway. EXP GERONTOL. 2022 Dec;170:111978 WB ;Rat. 36244586
- **[IF=4.014]** Zhang Kaixin. et al. MiR-129-3p regulates ferroptosis in the liver of Selenium-deficient broilers by targeting SLC7A11. POULTRY SCIENCE. 2022 Oct;:102271 WB ;Chicken. 10.1016/j.psj.2022.102271