GXP4 （Phospho-Ser104 ） Antibody

#58019

Number: 58019

Amount: 100μg/100μl

Form of Antibody: Rabbit IgG in phosphate buffered saline (without Mg2+ and Ca2+), pH 7.4, 150mM NaCl,0.02% sodium azide and 50% glycerol.

Storage/Stability: Store at -20℃/1 year

Immunogen: synthetic phosphopeptide corresponding to residues surrounding Ser104 of human GXP4

Purification: The antibody was affinity-purified from rabbit antiserum by affinity-chromatography using epitope-specific phosphopeptide. The antibody against non-phosphopeptide was removed by chromatography using non-phosphopeptide corresponding to the phospholation site.

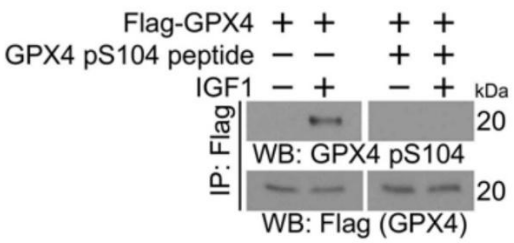
Specificity/Sensitivity: GXP4 （Phospho-Ser104)antibody detects endogenous levels of GXP4 only when phospholated at Serine104 .

Reactivity: Human

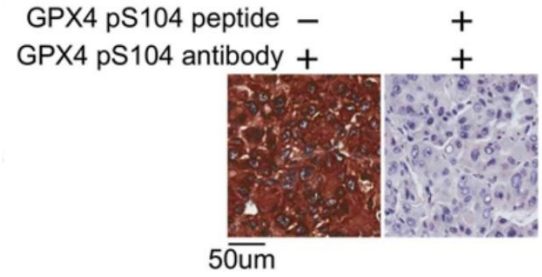
Applications:

Predicted MW: 20KD

WB **:**1:500~1:1000 IHC:1:50-200



Huh7 cells expressing Flag-GPX4 were treated with IGF1 for 1 h. Immunoblotting were performed with the GPX4 pS104 blocking peptide.



Huh7 cells expressing Flag-GPX4 were treated with IGF1 for 1 h. IHC analyses of human HCC samples were performed with the indicated antibodies and GPX4 pS104 blocking peptide. Scale bars, 50 μm.

Background :Ferroptosis is a form of regulated cell death that results from the production of iron-dependent reactive oxygen species (ROS) from excessive lipid peroxidation. The inhibition of GPX4 to induce ferroptosis has emerged as a therapeutic strategy to trigger cancer cell death. CKB acts as a protein kinase and phosphorylates GPX4 S104. This phosphorylation prevents HSC70 binding to GPX4, thereby abrogating the GPX4 degradation regulated by chaperone-mediated autophagy, alleviating ferroptosis and promoting tumour growth in mice. In addition, the levels of GPX4 are positively correlated with the phosphorylation levels of GPX4 S104 in human hepatocellular carcinoma specimens and associated with poor prognosis of patients with hepatocellular carcinoma [1] .

Reference:[1] Wu K, Yan M, Liu T, Wang Z, Duan Y, Xia Y, Ji G, Shen Y, Wang L, Li L, Zheng P, Dong B, Wu Q, Xiao L, Yang X, Shen H, Wen T, Zhang J, Yi J, Deng Y, Qian X, Ma L, Fang J, Zhou Q, Lu Z, Xu D. Creatine kinase B suppresses ferroptosis by phosphorylating GPX4 through a moonlighting function. ***Nat Cell Biol.*** 2023 May;25(5):714-725. doi: 10.1038/s41556-023-01133-9.