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PGK1 (Phospho-Tyr324) Antibody

#58021

Number: 58021

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 Tyr324 of human PGK1

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.

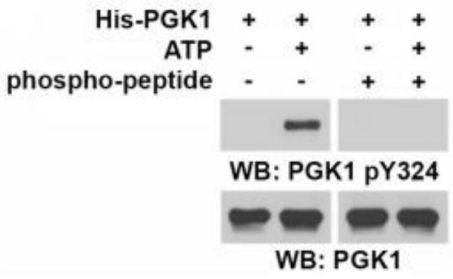
Specificity/Sensitivity: PGK1（Phospho-Tyr324)antibody detects endogenous levels of PGK1 only when phospholated at Tyrosine324 .

Reactivity: Human

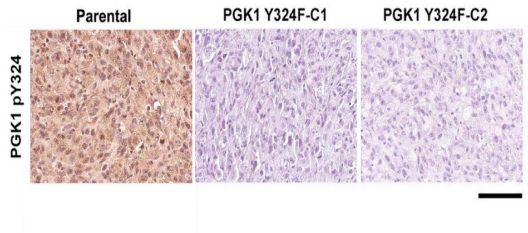
Applications:

Predicted MW: 43KD

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



Purified His-PGK1 was incubated in the presence or absence of ATP for autophosphorylation, which was followed by immunoblotting analyses with the indicated antibodies in the presence or absence of phospho-specific blocking peptide for the PGK1 pY324 antibody.



U87 cells with or without PGK1 Y324F knockin were intracranially injected into athymic nude mice (n = 7 per group). Mice were sacrificed and examined for tumor growth 28 days after injection. IHC staining of mouse tumor tissues was performed with antibody PGK1 pY324. Scale bars, 100

Background :PGK1, an instrumental ATP-generating enzyme in the glycolytic pathway, is upregulated in many types of human cancers. Qian et al. demonstrate that PGK1 functions as a protein kinase and autophosphorylates itself at Y324, leading to PGK1 activation. This phosphorylation is dephosphorylated by the protein phosphatase activity of PTEN. Loss of PTEN expression in tumors enhances PGK1 activity, thereby promoting glycolysis and brain tumor growth [1] .

Reference:[1] Qian X, Li X, Shi Z, Xia Y, Cai Q, Xu D, Tan L, Du L, Zheng Y, Zhao D, Zhang C, Lorenzi PL, You Y, Jiang BH, Jiang T, Li H, Lu Z. PTEN Suppresses Glycolysis by Dephosphorylating and Inhibiting Autophosphorylated PGK1. ***Mol Cell.*** 2019 Nov 7;76(3):516-527.e7. doi: 10.1016/j.molcel.2019.08.006.