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CHKα2 （Phospho-Ser279 ）Antibody

#58010

Number: 58010

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 Ser279 of human CHKα2

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 phosphorylation site.

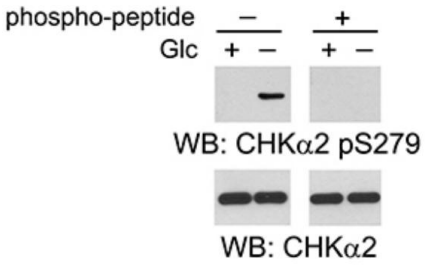
Specificity/Sensitivity: CHKα2 （Phospho-Ser279)antibody detects endogenous levels of CHKα2 only when phosphorylated at serine279 .

Reactivity: Human

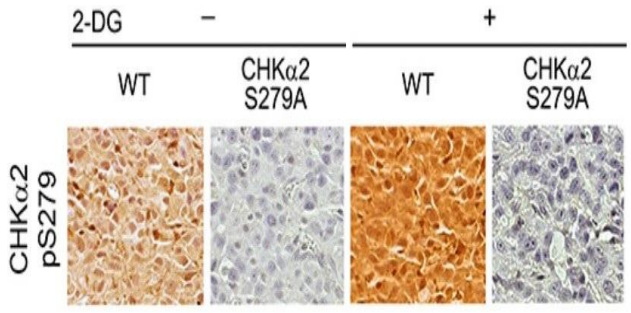
Applications:

Predicted MW: 50KD

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



Huh7 cells were stimulated with glucose deprivation for 1 h. Immunoblot analyses were performed in the presence or absence of a CHKα2 pS279 phospho-blocking peptide.



U87 cells and U87 cells with knockin expression of CHKa2 S279A were intracranially injected into athymic nude mice. Two weeks after tumor cell injection, 0.2 mL of 2-DG (500 mg/kg) was intraperitoneally injected daily for 14 days. Mouse tumor tissues were stained with the indicated antibodies.

Background :CHKa promotes tumor cell proliferation and survival. Its overexpression has been detected in 40% – 60% of human tumors and is correlated with prognosis in early-stage non-small cell lung cancer, hepatocellular carcinoma (HCC), and prostate cancers [1] Glucose deprivation could induce CHKa2 S279 phosphorylation in Huh7 cell. Levels of CHK α 2 S279 phosphorylation and PLIN2/3 phosphorylation are positively correlated with one another in human glioblastoma specimens and are associated with poor prognosis in glioblastoma patients [2] .

Refrence:[1] Challapalli A, Trousil S, Hazell S, Kozlowski K, Gudi M, Aboagye EO, Mangar S. Exploiting altered patterns of choline kinase-alpha expression on human prostate tissue to prognosticate prostate cancer. J Clin Pathol. 2015 Sep;68(9):703-9. doi: 10.1136/jclinpath-2015-202859.

[2] Liu R, Lee JH, Li J, Yu R, Tan L, Xia Y, Zheng Y, Bian XL, Lorenzi PL, Chen Q, Lu Z. Choline kinase alpha 2 acts as a protein kinase to promote lipolysis of lipid droplets. Mol Cell. 2021 Jul 1;81(13):2722-2735.e9. doi: 10.1016/j.molcel.2021.05.005.