CLOCK（Phospho-Ser106 ）Antibody

#58016

Number: 58016

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 Ser106 of human CLOCK

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.

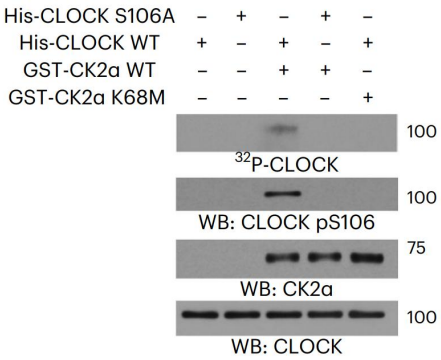
Specificity/Sensitivity: CLOCK（Phospho-Ser106)antibody detects endogenous levels of CLOCK only when phospholated at Serine106 .

Reactivity: Human

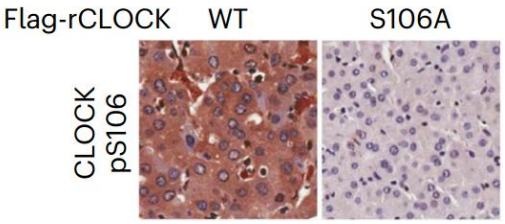
Applications:

Predicted MW: 100KD

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



In vitro kinase assays were performed by mixing purified WT GST-CK2 α or GST-CK2 α K68M protein with purified His-CLOCK WT or His-CLOCK S106A protein in the presence of [γ 32P]-ATP. Immunoblot analyses were performed with the indicated antibodies.



Parental Huh7 cells were intrahepatically injected into athymic nude mice. IHC analyses of the indicated xenograft tumours from nude mice were performed with the indicated antibodies.

Background :The transcriptional activity of CLOCK governs circadian rhythms, and impairment of the circadian clock has been linked to cancer development. Activation of receptor tyrosine kinases promoted the binding of CK2α to CLOCK and the subsequent CK2α-mediated CLOCK S106 phosphorylation. This phosphorylation disassembled CLOCK–BMAL1 heterodimerization, leading to suppression of the CLOCK/BMAL1-mediated expression of the downstream genes in HCC cells[[1] Liu T, Wang Z, Ye L, Duan Y, Jiang H, He H, Xiao L, Wu Q, Xia Y, Yang M, Wu K, Yan M, Ji G, Shen Y, Wang L, Li L, Zheng P, Dong B, Shao F, Qian X, Yu R, Zhang Z, Lu Z, Xu D. Nucleus-exported CLOCK acetylates PRPS to promote de novo nucleotide synthesis and liver tumour growth. Nat Cell Biol. 2023 Feb;25(2):273-284. doi: 10.1038/s41556-022-01061-0.][1].

Reference:[1] Liu T, Wang Z, Ye L, Duan Y, Jiang H, He H, Xiao L, Wu Q, Xia Y, Yang M, Wu K, Yan M, Ji G, Shen Y, Wang L, Li L, Zheng P, Dong B, Shao F, Qian X, Yu R, Zhang Z, Lu Z, Xu D. Nucleus-exported CLOCK acetylates PRPS to promote de novo nucleotide synthesis and liver tumour growth. ***Nat Cell Biol.*** 2023 Feb;25(2):273-284. doi: 10.1038/s41556-022-01061-0.