



# PLIN2 ( Phospho-Tyr232 ) Antibody

#58012

**Number:** 58012

**Amount:** 100µg/100µl

**Form of Antibody:** Rabbit IgG in phosphate buffered saline (without Mg<sup>2+</sup> and Ca<sup>2+</sup>), pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol.

**Storage/Stability:** Store at -20°C/1 year

**Immunogen:** synthetic phosphopeptide corresponding to residues surrounding Tyr232 of human PLIN2

**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.

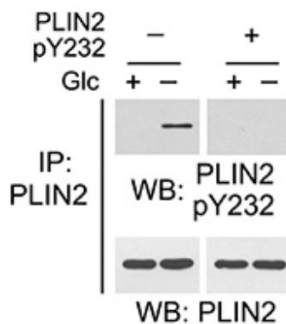
**Specificity/Sensitivity:** PLIN2 ( Phospho-Tyr232 ) antibody detects endogenous levels of PLIN2 only when phosphorylated at tyrosine232 .

**Reactivity:** Human

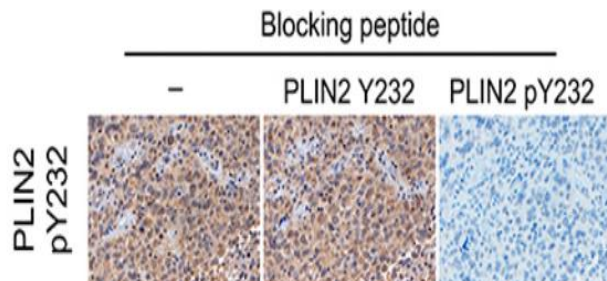
**Applications:**

Predicted MW: 50KD

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



Huh7 cells were stimulated with glucose deprivation for 1 h. Immunoprecipitation was performed by using the indicated antibodies. Immunoblotting was performed in the presence or absence of the corresponding PLIN2 pY232 phospho-blocking peptide.



Glioblastoma specimens were immunohistochemically stained with the indicated antibodies in the presence of the indicated blocking peptides.

**Background** :Lipid droplets are surrounded by a single layer of polar, amphipathic phospholipids with structural proteins of the perilipin (PLIN) family, with PLIN1 being primarily an adipocyte protein and PLIN2 and PLIN3 being expressed ubiquitously [1] . Cells use these stored lipids as needed for a variety of functions, including energy production via fatty acid oxidation (also known as  $\beta$ -oxidation), membrane biogenesis for cell growth, protein modification, signaling, and secretion with lipoproteins. Glucose deprivation results in the binding of CHK  $\alpha$  2 to PLIN2/3 and subsequent CHKa2-mediated PLIN2 Y232 phosphorylation. The protein kinase activity of CHKa2-dependent PLIN2/3 phosphorylation is required for tumor cell proliferation and tumor growth [2].

**Reference:**[1] Walther TC, Farese RV Jr. Lipid droplets and cellular lipid metabolism. *Annu Rev Biochem.* 2012; 81:687-714. doi: 10.1146/annurev-biochem-061009-102430.

[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.