PLIN3 (Phospho-Tyr251) Antibody

#58013

Number: 58013

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 Tyr251 of human PLIN3

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.

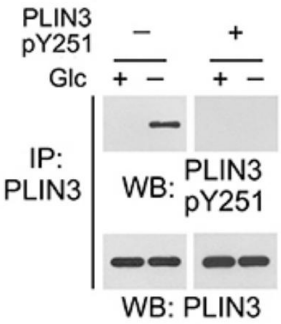
Specificity/Sensitivity: PLIN3 （Phospho-Tyr251)antibody detects endogenous levels of PLIN3 only when phospholated at tyrosine251 .

Reactivity: Human

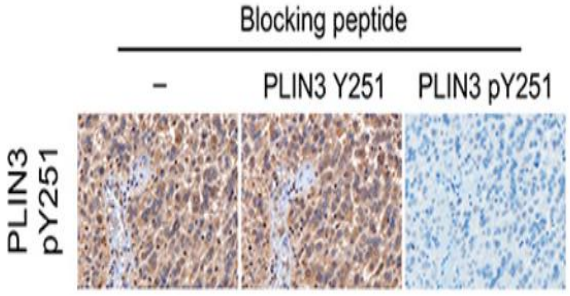
Applications:

Predicted MW: 52KD

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 PLIN3 pY251 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 b-oxidation), membrane biogenesis for cell growth, protein modification, signaling, and secretion with lipoproteins. Glucose deprivation results in the binding of CHK α 2 to PLIN2/3 and subsequent CHKa2-mediated PLIN2 Y232 phosphorylation. The protein kinase activity of CHKa2-depdendent 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.

For Research Use Only