

Basic Information

Product Name	Anti-PI3 Kinase p110 Alpha/PIK3CA Antibody		
Gene Name	PIK3CA		
Source	Rabbit		
Isotype	IgG		
Species Reactivity	human		
Tested Application	WB, ICC/IF		
Contents	500 ug/ml; Rabbit IgG in phosphate buffered saline, pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol.		
Immunogen	A synthesized peptide derived from human PI 3 Kinase catalytic subunit alpha Phosphoinositide-3-kinase (PI3K) that phosphorylates PtdIns (Phosphatidylinositol), PtdIns4P (Phosphatidylinositol 4-phosphate) and PtdIns (4,5) P2 (Phosphatidylinositol 4,5-bisphosphate) to generate phosphatidylinositol 3,4,5-trisphosphate (PIP3) . PIP3 plays a key role by recruiting PH domain-containing proteins to the membrane, including AKT1 and PDK1, activating signaling cascades involved in cell growth, survival, proliferation, motility and morphology. Participates in cellular signaling in response to various growth factors.		
concentration	500 ug/ml		
Purification	Affinity-chromatography		
Observed MW	110KD		
Dilution Ratios	Western blot (WB): 1:500-2000 Immunocytochemistry/Immunofluorescence(ICC/IF):1:20-100		

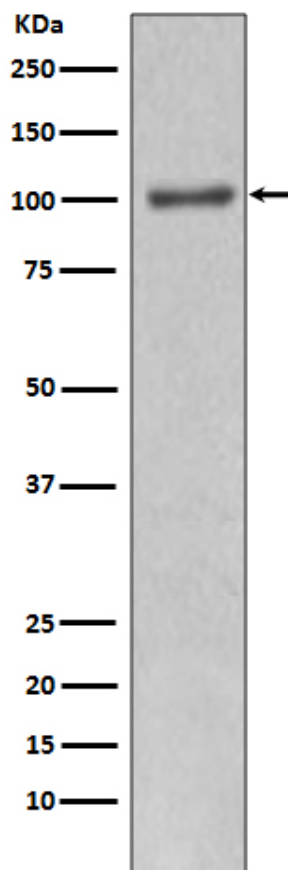
Storage

12 months from date of receipt, -20°C as supplied. 6 months 2 to 8°C after reconstitution. Avoid repeated freezing and thawing.

Background Information

Phosphatidylinositol-4,5-bisphosphate 3-kinase, also called PIK3CA, is composed of an 85 kDa regulatory subunit and a 110 kDa catalytic subunit. PIK3CA gene is mapped to 3q26.32. The protein encoded by this gene represents the catalytic subunit, which uses ATP to phosphorylate phosphatidylinositols (PtdIns), PtdIns4P and PtdIns(4,5)P2. Recent evidence has shown that the PIK3CA gene is mutated in a range of human cancers. It has been found to be oncogenic and has been implicated in cervical cancers. PIK3CA mutations in breast cancer may be a predictive marker to guide the selection of patients who would benefit from mTOR inhibitor therapy. In addition to that, the presence of PIK3CA mutation may predict response to aspirin therapy for colorectal cancer, indicating power and promise of "Molecular Pathological Epidemiology (MPE)" approach as well as a complex interaction within the tumor microenvironment in this phenomenon.

Selected Validation Data



Western blot analysis of PI 3 kinase p110 alpha expression in Jurkat cell lysate. Western blot analysis of PI 3 kinase p110 alpha expression in Jurkat cell lysate.