

#4255 Store at -20C

PI3 Kinase p110 α Antibody


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Applications: WB, IP	Reactivity: H M R	Sensitivity: Endogenous	MW (kDa): 110	Source: Rabbit	UniProt ID: #P42336	Entrez-Gene Id: 5290
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Product Usage Information	Application Western Blotting Immunoprecipitation	Dilution 1:1000 1:50
Storage	Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 μ g/ml BSA and 50% glycerol. Store at –20°C. Do not aliquot the antibody.	
Specificity / Sensitivity	PI3 Kinase p110 α Antibody detects endogenous levels of total PI3K p110 α protein.	
Species predicted to react based on 100% sequence homology:	Bovine	
Source / Purification	Polyclonal antibodies are produced by immunizing animals with a synthetic peptide corresponding to the human sequence of PI3K p110 α . Antibodies are purified by protein A and peptide affinity chromatography.	
Background	Phosphoinositide 3-kinase (PI3K) catalyzes the production of phosphatidylinositol-3,4,5-triphosphate by phosphorylating phosphatidylinositol (PI), phosphatidylinositol-4-phosphate (PIP), and phosphatidylinositol-4,5-bisphosphate (PIP ₂). Growth factors and hormones trigger this phosphorylation event, which in turn coordinates cell growth, cell cycle entry, cell migration, and cell survival (1). PTEN reverses this process, and research studies have shown that the PI3K signaling pathway is constitutively activated in human cancers that have loss of function of PTEN (2). PI3Ks are composed of a catalytic subunit (p110) and a regulatory subunit. Various isoforms of the catalytic subunit (p110 α , p110 β , p110 γ , and p110 δ) have been isolated, and the regulatory subunits that associate with p110 α , p110 β , and p110 δ are p85 α and p85 β (3). In contrast, p110 γ associates with a p101 regulatory subunit that is unrelated to p85. Furthermore, p110 γ is activated by β y subunits of heterotrimeric G proteins (4).	
Background References	1. Cantley, L.C. (2002) <i>Science</i> 296, 1655-7. 2. Simpson, L. and Parsons, R. (2001) <i>Exp Cell Res</i> 264, 29-41. 3. Neri, L.M. et al. (2002) <i>Biochim Biophys Acta</i> 1584, 73-80. 4. Stoyanov, B. et al. (1995) <i>Science</i> 269, 690-3.	

Species Reactivity	Species reactivity is determined by testing in at least one approved application (e.g., western blot).
Western Blot Buffer	IMPORTANT: For western blots, incubate membrane with diluted primary antibody in 5% w/v nonfat dry milk, 1X TBS, 0.1% Tween® 20 at 4°C with gentle shaking, overnight.
Applications Key	WB: Western Blotting IP: Immunoprecipitation
Cross-Reactivity Key	H: human M: mouse R: rat Hm: hamster Mk: monkey Vir: virus Mi: mink C: chicken Dm: D. melanogaster X: Xenopus Z: zebrafish B: bovine Dg: dog Pg: pig Sc: S. cerevisiae Ce: C. elegans Hr: horse GP: Guinea Pig Rab: rabbit All: all species expected
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