

Rabbit PI3KCA Polyclonal Antibody | anti-PIK3CA antibody

PI3KCA Antibody (C-term)

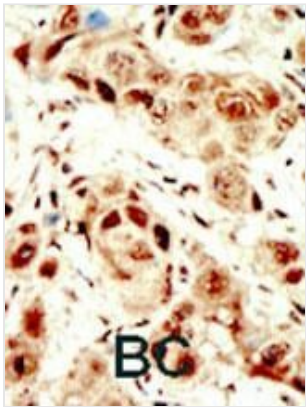
CATALOG #	HOST	REACTIVITY	APPLICATIONS
AAA283629	Rabbit	Human (Predicted Reactivity: Bovine)	Immunohistochemistry, Flow Cytometry, Functional Assay, ELISA, Western Blot

PRODUCT SYNONYMS

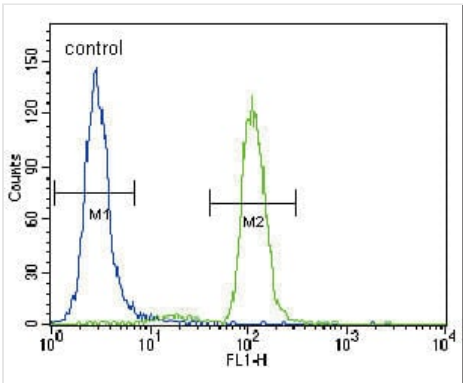
PI3KCA; Polyclonal Antibody; PI3KCA Antibody (C-term); Phosphatidylinositol 4; 5-bisphosphate 3-kinase catalytic subunit alpha isoform; PI3-kinase subunit alpha; PI3K-alpha; PI3Kalpha; PtdIns-3-kinase subunit alpha; 5-bisphosphate 3-kinase 110 kDa catalytic subunit alpha; PtdIns-3-kinase subunit p110-alpha; p110alpha; Phosphoinositide-3-kinase catalytic alpha polypeptide; Serine/threonine protein kinase PIK3CA; PIK3CA; anti-PIK3CA antibody

PRODUCT SPECIFICATIONS

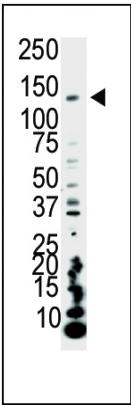
Host	Rabbit
Reactivity	Human (Predicted Reactivity: Bovine)
Clonality	Polyclonal
Isotype	Rabbit Ig
Specificity	This PI3KCA antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 1019-1050 amino acids from the C-terminal region of human PI3KCA.
Purity/Purification	Purified Rabbit Polyclonal Antibody (Pab)
Form/Format	Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is prepared by Saturated Ammonium Sulfate (SAS) precipitation followed by dialysis against PBS.
Sequence Positions	1019-1050
Sequence Length	1068
Applicable Applications for anti-PIK3CA antibody	IHC (Immunohistochemistry), FCM/FACS (Flow Cytometry), ELISA, WB (Western Blot)
Function	Phosphoinositide-3-kinase (PI3K) phosphorylates phosphatidylinositol (PI) and its phosphorylated derivatives at position 3 of the inositol ring to produce 3-phosphoinositides (PubMed:15135396, PubMed:23936502, PubMed:28676499). Uses ATP and PtdIns(4,5) P2 (phosphatidylinositol 4,5-bisphosphate) to generate phosphatidylinositol 3,4,5-trisphosphate (PIP3) (PubMed:15135396, PubMed:28676499). 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. Involved in the activation of AKT1 upon stimulation by receptor tyrosine kinases ligands such as EGF, insulin, IGF1, VEGFA and PDGF. Involved in signaling via insulin-receptor substrate (IRS) proteins. Essential in endothelial cell migration during vascular development through VEGFA signaling, possibly by regulating RhoA activity. Required for lymphatic vasculature development, possibly by binding to RAS and by activation by EGF and FGF2, but not by PDGF. Regulates invadopodia formation through the PDK1-AKT1 pathway. Participates in cardiomyogenesis in embryonic stem cells through a AKT1 pathway. Participates in vasculogenesis in embryonic stem cells through PDK1 and protein kinase C pathway. In addition to its lipid kinase activity, it displays a serine-protein kinase activity that results in the autophosphorylation of the p85alpha regulatory subunit as well as phosphorylation of other proteins such as 4EBP1, H-Ras, the IL-3 beta c receptor and possibly others (PubMed:23936502, PubMed:28676499). Plays a role in the positive regulation of phagocytosis and pinocytosis (By similarity).
Preparation and Storage	Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.



IHC (Immunohistochemisry)
Formalin-fixed and paraffin-embedded human cancer tissue reacted with the primary antibody, which was peroxidase-conjugated to the secondary antibody, followed by DAB staining. This data demonstrates the use of this antibody for immunohistochemistry; clinical relevance has not been evaluated. BC = breast carcinoma; HC = hepatocarcinoma.



FCM/FACS (Flow Cytometry)
PIK3CA Antibody (C-term) flow cytometric analysis of HeLa cells (right histogram) compared to a negative control cell (left histogram).FITC-conjugated goat-anti-rabbit secondary antibodies were used for the analysis.



WB (Western Blot)
Western blot analysis of anti-PIK3CA Pab in HeLa cell lysate. PIK3CA (arrow) was detected using purified Pab. Secondary HRP-anti-rabbit was used for signal visualization with chemiluminescence.

ADDITIONAL INFORMATION

Related Product Information for anti-PIK3CA antibody	Phosphatidylinositol 3-kinase is composed of an 85 kDa regulatory subunit and a 110 kDa catalytic subunit. This protein represents the catalytic subunit, which uses ATP to phosphorylate PtdIns, PtdIns4P and PtdIns(4,5)P2. PIK3CA has been found to be oncogenic and has been implicated in cervical cancers.
Product Categories/Family for anti-PIK3CA antibody	Cancer; Immunology; Signal Transduction
References	Tiwari, S. Nat Immunol. August; 10(8): 907-917 (2009). Ballou, L.M., et al., J. Biol. Chem. 278(26):23472-23479 (2003). Singh, B., et al., Genes Dev. 16(8):984-993 (2002). Shayesteh, L., et al., Nat. Genet. 21(1):99-102 (1999). Volinia, S., et al., Genomics 24(3):472-477 (1994). Hiles, I.D., et al., Cell 70(3):419-429 (1992).

NCBI AND UNIPROT INFORMATION

NCBI GI #	54792082
NCBI GeneID	5290
NCBI Accession #	NP_006209.2

NCBI GenBank Nucleotide #	NM_006218.2
UniProt Accession #	P42336 ; Q14CW1 ; Q99762
NCBI Official Full Name	phosphatidylinositol 4,5-bisphosphate 3-kinase catalytic subunit alpha isoform
NCBI Official Synonym Full Names	phosphatidylinositol-4,5-bisphosphate 3-kinase, catalytic subunit alpha
NCBI Official Symbol	PIK3CA
NCBI Official Synonym Symbols	MCM; CWS5; MCAP; PI3K; CLOVE; MCMTc; p110-alpha
NCBI Protein Information	phosphatidylinositol 4,5-bisphosphate 3-kinase catalytic subunit alpha isoform
UniProt Protein Name	Phosphatidylinositol 4,5-bisphosphate 3-kinase catalytic subunit alpha isoform
UniProt Gene Name	PIK3CA
UniProt Synonym Gene Names	PI3-kinase subunit alpha; PI3K-alpha; PI3Kalpha; PtdIns-3-kinase subunit alpha; PtdIns-3-kinase subunit p110-alpha; p110alpha
UniProt Entry Name	PK3CA_HUMAN

For Research Use Only. Not for use in diagnostic or therapeutic procedures. Small volumes of product may become entrapped in the seal of the vial during shipment and storage; if necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the cap.

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Online datasheet: <https://stage.aaabiotech.com/polyclonal/pi3kca-antibody-immunohistochemistry-flow-cytometry-western-blot-elisa/283629>