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KD-Validated Anti-PI3 Kinase p110 beta Rabbit Monoclonal Antibody

Rabbit monoclonal antibody
Catalog # AGI2051

Specification

KD-Validated Anti-PI3 Kinase p110 beta Rabbit Monoclonal Antibody - Product Information

Application	**WB, FC**
Primary Accession	P42338
Reactivity	**Human**
Clonality	**Monoclonal**
Isotype	**Rabbit IgG**
Calculated MW	**Predicted , 123 kDa , observed , 110 kDa KDa**
Gene Name	**PIK3CB**
Aliases	**Phosphatidylinositol-4,5-Bisphosphate 3-Kinase; Catalytic SubunitBeta; PI3K; PIK3C1; PI3KBETA; Phosphoinositide-3-Kinase; Catalytic; Beta Polypeptide; Phosphatidylinositol 4,5-Bisphosphate 3-Kinase Catalytic Subunit Beta Isoform; Phosphatidylinositol 4,5-Bisphosphate 3-Kinase 110 KDa Catalytic Subunit Beta; Phosphatidylinositol-4,5-Bisphosphate 3-Kinase 110 KDa Catalytic Subunit Beta; PtdIns-3-Kinase Subunit Beta; PI3-Kinase P110 Subunit Beta; PtdIns-3-Kinase Subunit P110-Beta; PtdIns-3-Kinase P110; PI3K-beta; PI3Kbeta; PI3-Kinase Subunit Beta; p110beta; EC 2.7.1.153; PI3KCB; P110BETA; EC 2.7.1**
Immunogen	**A synthesized peptide derived from human PI3 Kinase p110 beta**

KD-Validated Anti-PI3 Kinase p110 beta Rabbit Monoclonal Antibody - Additional Information

Gene ID	**5291**

Other Names
Phosphatidylinositol 4, 5-bisphosphate 3-kinase catalytic subunit beta isoform, PI3-kinase subunit beta, PI3K-beta, PI3Kbeta, PtdIns-3-kinase subunit beta, 2.7.1.153, Phosphatidylinositol 4, 5-bisphosphate 3-kinase 110 kDa catalytic subunit beta, PtdIns-3-kinase subunit p110-beta, p110beta, Serine/threonine protein kinase PIK3CB, 2.7.11.1, PIK3CB, PIK3C1

KD-Validated Anti-PI3 Kinase p110 beta Rabbit Monoclonal Antibody - Protein Information

Name PIK3CB

Synonyms PIK3C1

Function
Phosphoinositide-3-kinase (PI3K) phosphorylates phosphatidylinositol derivatives at position 3 of the inositol ring to produce 3-phosphoinositides (PubMed:15135396). Uses ATP and PtdIns(4,5)P2 (phosphatidylinositol 4,5-bisphosphate) to generate phosphatidylinositol 3,4,5-trisphosphate (PIP3) (PubMed:15135396). PIP3 plays a key role by recruiting PH domain-containing proteins to the membrane, including AKT1 and PDPK1, activating signaling cascades involved in cell growth, survival, proliferation, motility and morphology. Involved in the activation of AKT1 upon stimulation by G- protein coupled receptors (GPCRs) ligands such as CXCL12, sphingosine 1-phosphate, and lysophosphatidic acid. May also act downstream receptor tyrosine kinases. Required in different signaling pathways for stable platelet adhesion and aggregation. Plays a role in platelet activation signaling triggered by GPCRs, alpha-IIb/beta-3 integrins (ITGA2B/ ITGB3) and ITAM (immunoreceptor tyrosine-based activation motif)-bearing receptors such as GP6. Regulates the strength of adhesion of ITGA2B/ ITGB3 activated receptors necessary for the cellular transmission of contractile forces. Required for platelet aggregation induced by F2 (thrombin) and thromboxane A2 (TXA2). Has a role in cell survival. May have a role in cell migration. Involved in the early stage of autophagosome formation. Modulates the intracellular level of PtdIns3P (phosphatidylinositol 3-phosphate) and activates PIK3C3 kinase activity. May act as a scaffold, independently of its lipid kinase activity to positively regulate autophagy. May have a role in insulin signaling as scaffolding protein in which the lipid kinase activity is not required. May have a kinase-independent function in regulating cell proliferation and in clathrin-mediated endocytosis. Mediator of oncogenic signal in cell lines lacking PTEN. The lipid kinase activity is necessary for its role in oncogenic transformation. Required for the growth of ERBB2 and RAS driven tumors. Also has a protein kinase activity showing autophosphorylation (PubMed:12502714).

Cellular Location
Cytoplasm. Nucleus. Note=Interaction with PIK3R2 is required for nuclear localization and export

Tissue Location
Expressed ubiquitously.

KD-Validated Anti-PI3 Kinase p110 beta Rabbit Monoclonal Antibody - Protocols

Provided below are standard protocols that you may find useful for product applications.

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

KD-Validated Anti-PI3 Kinase p110 beta Rabbit Monoclonal Antibody - Images

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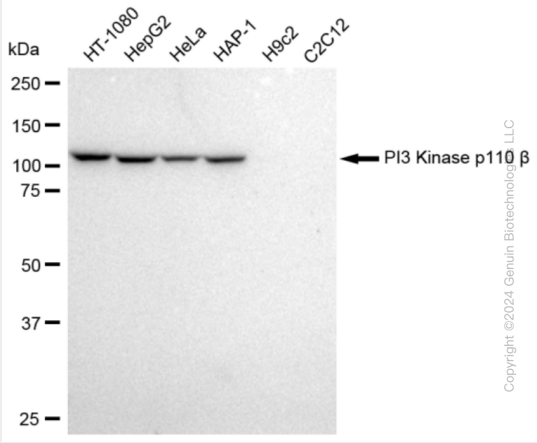
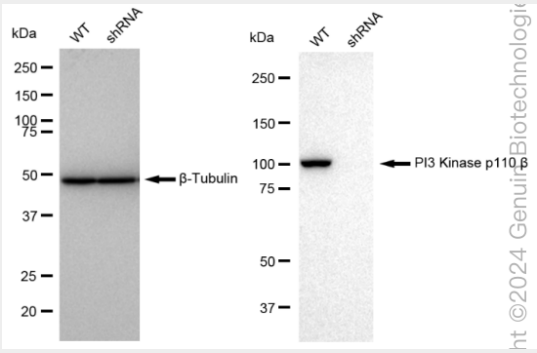
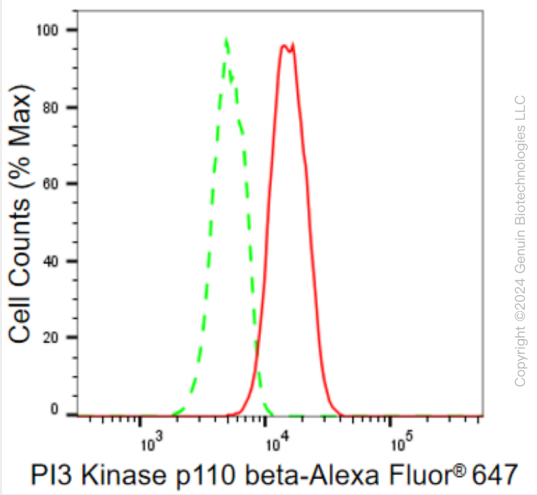


Western blotting analysis using anti-PI3 Kinase p110 beta antibody (Cat#AGI2051). Total cell lysates (30 µg) from various cell lines were loaded and separated by SDS-PAGE. The blot was incubated with anti-PI3 Kinase p110 beta antibody (Cat#AGI2051, 1:5,000) and HRP-conjugated goat anti-rabbit secondary antibody respectively.



Western blotting analysis using anti-PI3 Kinase p110 beta antibody (Cat#AGI2051). PI3 Kinase p110 beta expression in wild type (WT) and PI3 Kinase p110 beta shRNA knockdown (KD) HT-1080 cells with 30 µg of total cell lysates. β-Tubulin serves as a loading control. The blot was incubated with anti-PI3 Kinase p110 beta antibody (Cat#AGI2051, 1:5,000) and HRP-conjugated goat anti-rabbit secondary antibody respectively.



Flow cytometric analysis of PI3 Kinase p110 beta expression in HT-1080 cells using PI3 Kinase p110 beta antibody (Cat#AGI2051, 1:2,000). Green, isotype control; red, PI3 Kinase p110 beta.