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| <b>Swiss-Prot No.:</b>        | P42338  |
| <b>Altename:</b>              | PIK3CB  |
| <b>Storage/Stability:</b>     | Store at -20°C. Avoid freeze / thaw cycles.   |
| <b>Immunogen:</b>             | Recombinant fusion protein containing a sequence corresponding to amino acids 771-1070 of human PIK3CB (NP_006210.1).   |
| <b>Purification:</b>          | Affinity purified   |
| <b>Reactivity:</b>            | Human,Mouse   |
| <b>Other Names:</b>           | PI3K; PIK3C1; P110BETA; PI3KBETA  |
| <b>Cellular localization:</b> | Cytoplasm, Nucleus  |
|                               | 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. 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 |

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| <b>Relevance:</b>             | 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. |
| <b>Source:</b>                | Rabbit  |
| <b>Antibody type:</b>         | Polyclonal antibody   |
| <b>Isotype:</b>               | Rabbit IgG  |
| <b>Molecular Weight:</b>      | 110kDa  |
| <b>Preservative:</b>          | PBS with 0.02% sodium azide, 50% glycerol, pH7.3.   |
| <b>Recommended Dilutions:</b> | WB 1:500 - 1:2000; IHC 1:50 - 1:100(Optimal dilutions should be determined by the end user)   |