

Recombinant Human PIK3C2A Protein (Phe172-Asn403), His tagged

Cat. No. PIK3C2A-3165H **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Recombinant human PIK3C2A (Phe172-Asn403) protein fused with His tag was expressed in E. coli.
Species	Human
Source	E.coli
ProteinLength	Phe172-Asn403
Description	Generates phosphatidylinositol 3-phosphate (PtdIns3P) and phosphatidylinositol 3, 4-bisphosphate (PtdIns (3, 4) P2) that act as second messengers. Has a role in several intracellular trafficking events. Functions in insulin signaling and secretion. Required for translocation of the glucose transporter SLC2A4/GLUT4 to the plasma membrane and glucose uptake in response to insulin-mediated RHOQ activation. Regulates insulin secretion through two different mechanisms: involved in glucose-induced insulin secretion downstream of insulin receptor in a pathway that involves AKT1 activation and TBC1D4/AS160 phosphorylation, and participates in the late step of insulin granule exocytosis probably in insulin granule fusion. Synthesizes PtdIns3P in response to insulin signaling. Functions in clathrin-coated endocytic vesicle formation and distribution. Regulates dynamin-independent endocytosis, probably by recruiting EEA1 to internalizing vesicles. In neurosecretory cells synthesizes PtdIns3P on large dense core vesicles. Participates in calcium induced contraction of vascular smooth muscle by regulating myosin light chain (MLC) phosphorylation through a mechanism

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involving Rho kinase-dependent phosphorylation of the MLCP-regulatory subunit MYPT1. May play a role in the EGF signaling cascade. May be involved in mitosis and UV-induced damage response. Required for maintenance of normal renal structure and function by supporting normal podocyte function. Involved in the regulation of ciliogenesis and trafficking of ciliary components.

Molecular Mass 27.12 kDa

Purity >90 % as determined by SDS-PAGE.

Notes For research use only.

Storage Use a manual defrost freezer and avoid repeated freeze thaw cycles. Store at 2 to 8 centigrade for one week. Store at -20 to -80 centigrade for twelve months from the date of receipt.

Storage Buffer Supplied as solution form in PBS pH 7.5 or lyophilized from PBS pH 7.5.

Reconstitution Reconstitute in sterile water for a stock solution.

Shipping In general, proteins are provided as lyophilized powder/frozen liquid. They are shipped out with dry ice/blue ice unless customers require otherwise.

GENE INFORMATION

Gene Name PIK3C2A phosphoinositide-3-kinase, class 2, alpha polypeptide [Homo sapiens (human)]

Official Symbol PIK3C2A

Synonyms PIK3C2A; phosphoinositide-3-kinase, class 2, alpha polypeptide; phosphatidylinositol-

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4-phosphate 3-kinase C2 domain-containing subunit alpha; PI3K C2alpha; PI3K-C2alpha; PI3K-C2-alpha; ptdIns-3-kinase C2 subunit alpha; phosphoinositide 3-kinase-C2-alpha; C2-containing phosphatidylinositol kinase; CPK; PI3-K-C2A; MGC142218; PI3-K-C2 (ALPHA); DKFZp686L193;

Gene ID 5286

mRNA Refseq NM_002645

Protein Refseq NP_002636

MIM 603601

UniProt ID O00443

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