

Product datasheet for KN313294LP

Pik3ca Mouse Gene Knockout Kit (CRISPR)

Product data:

OriGene Technologies, Inc.

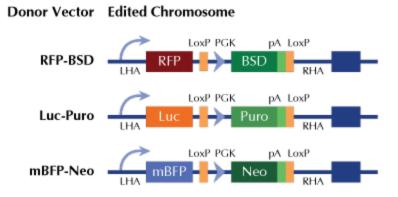
9620 Medical Center Drive, Ste 200 Rockville, MD 20850, US Phone: +1-888-267-4436 https://www.origene.com techsupport@origene.com EU: info-de@origene.com CN: techsupport@origene.cn

Product Type:	Knockout Kits (CRISPR)
Format:	2 gRNA vectors, 1 Luciferase-Puro donor, 1 scramble control
Donor DNA:	Luciferase-Puro
Symbol:	Pik3ca
Locus ID:	18706
Components:	 KN313294G1, Pik3ca gRNA vector 1 in pCas-Guide CRISPR vector (GE100002) KN313294G2, Pik3ca gRNA vector 2 in pCas-Guide CRISPR vector (GE100002) KN313294LPD, donor DNA containing left and right homologous arms and Luciferase-Puro functional cassette. GE100003, scramble sequence in pCas-Guide vector
RefSeq:	<u>NM 008839</u>
UniProt ID:	P42337
Synonyms:	6330412C24Rik; caPl3K; p110; p110alpha
Summary:	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 PDPK1, 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 PDPK1-AKT1 pathway. Participates in cardiomyogenesis in embryonic stem cells through a AKT1 pathway. Participates in vasculogenesis in embryonic stem cells through a PDK1 (p85alpha regulatory subunit), EIF4EBP1 and HRAS. Plays a role in the positive regulation of phagocytosis and pinocytosis (PubMed:19604150). [UniProtKB/Swiss-Prot Function]



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Product images:



RFP, Luc, and mBFP will be under native gene promoter

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