

PIP4K2B Protein, Human (His)

Cat. No.:	HY-P700597
Synonyms:	PIP4K2B; phosphatidylinositol-5-phosphate 4-kinase, type II, beta; phosphatidylinositol 4 phosphate 5 kinase, type II, beta , PIP5K2B; phosphatidylinositol-5-phosphate 4-kinase type-2 beta; PIP5KIIB; PIP5KIIBeta; PIP4KI-beta; PTDINS(4)P-5-kinase; PI(5)P 4-kinase type II beta; diphosphoinositide kinase 2-beta; ptdIns(5)P-4-kinase isoform 2-beta; 1-phosphatidylinositol-4-phosphate kinase; 1-phosphatidylinositol-5-phosphate 4-kinase 2-beta; phosphatidylinositol-4-phosphate 5-kinase, type II, beta; PI5P4KB; PIP5K2B;
Species:	Human
Source:	E. coli
Accession:	P78356 (S2-T416)
Gene ID:	8396
Molecular Weight:	53.3 kDa

PROPERTIES

AA Sequence

S S N C T S T T A V	A V A P L S A S K T	K T K K K H F V C Q	K V K L F R A S E P
I L S V L M W G V N	H T I N E L S N V P	V P V M L M P D D F	K A Y S K I K V D N
H L F N K E N L P S	R F K F K E Y C P M	V F R N L R E R F G	I D D Q D Y Q N S V
T R S A P I N S D S	Q G R C G T R F L T	T Y D R R F V I K T	V S S E D V A E M H
N I L K K Y H Q F I	V E C H G N T L L P	Q F L G M Y R L T V	D G V E T Y M V V T
R N V F S H R L T V	H R K Y D L K G S T	V A R E A S D K E K	A K D L P T F K D N
D F L N E G Q K L H	V G E E S K K N F L	E K L K R D V E F L	A Q L K I M D Y S L
L V G I H D V D R A	E Q E E M E V E E R	A E D E E C E N D G	V G G N L L C S Y G
T P P D S P G N L L	S F P R F F G P G E	F D P S V D V Y A M	K S H E S S P K K E
V Y F M A I I D I L	T P Y D T K K K A A	H A A K T V K H G A	G A E I S T V N P E
Q Y S K R F N E F M	S N I L T		

Biological Activity

The enzyme activity of this recombinant protein is testing in progress, we cannot offer a guarantee yet.

Appearance

Lyophilized powder.

Formulation

Lyophilized from a 0.2 µm filtered solution of Tris/PBS-based buffer, 6% Trehalose, pH 8.0.

Endotoxin Level

<1 EU/µg, determined by LAL method.

Reconstitution

It is not recommended to reconstitute to a concentration less than 100 µg/mL in ddH₂O.

Storage & Stability

Stored at -20°C for 2 years. After reconstitution, it is stable at 4°C for 1 week or -20°C for longer (with carrier protein). It is recommended to freeze aliquots at -20°C or -80°C for extended storage.

Shipping

Room temperature in continental US; may vary elsewhere.

DESCRIPTION

Background

PIP4K2B Protein actively participates in the biosynthesis of phosphatidylinositol 4,5-bisphosphate, demonstrating a preference for GTP over ATP in the phosphorylation of PI(5)P, and its enzymatic activity is intricately linked to physiological GTP concentrations. The protein's unique GTP-sensing ability plays a critical role in metabolic adaptation. Notably, PIP4Ks, including PIP4K2B, exert a negative regulatory influence on insulin signaling through a catalytic-independent mechanism. They form interactions with PIP5Ks, effectively suppressing PIP5K-mediated synthesis of PtdIns(4,5)P₂ and impeding insulin-dependent conversion to PtdIns(3,4,5)P₃. This multifaceted role underscores the importance of PIP4K2B in modulating key signaling pathways that contribute to cellular homeostasis and metabolic responsiveness.

Caution: Product has not been fully validated for medical applications. For research use only.

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