Recombinant PK3C3 protein (His tag)

Catalog Number	540791
Synonyms	PI3-kinase type 3; PI3K type 3; PtdIns-3-kinase type 3; Phosphatidylinositol 3-kinase p100 subunit; Phosphoinositide-3-kinase class 3; hVps34
Species	Human
Expression System	E. coli
Accession	Q8NEB9
Molecular Weight	Predictes a molecular mass of 49.35 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 50 kDa band.

Product Information

Sequence Region	473-887
Form	Lyophilized powder
Formulation	Lyophilized from sterile PBS, pH 7.4
Purity	>90%, by SDS-PAGE with Coomassie Brilliant Blue staining.
Endotoxin	Not tested.
Activity	Not tested.
Stability	Samples are stable for up to twelve months from date of receipt at -70℃
Protein Construction	DNA encoding 473-887 aa (Q8NEB9) were fused with 6His tag.

Storage & Handling

Reconstitution	Reconstitute at 0.25 μg/μl in sterile water for short-term storage. Reconstitution with 50% glycerol solution is recommended for longer term storage (see Stability and Storage for more details). If a different concentration is needed for your purposes please adjust the reconstitution volume as required (please note: the ion concentration of the final solution will vary according to the volume used). Note: Centrifuge vial before opening. When reconstituting, gently pipet and wash down the sides of the vial to ensure full recovery of the protein into solution.
Storage	Store it under sterile conditions at -20℃ to -80℃. It is recommended that the protein be aliquoted for optimal storage. Avoid repeated freeze-thaw cycles.
Shipping	In general, recombinant proteins are provided as lyophilized powder which are shipped at ambient temperature. Bulk packages of recombinant proteins are provided as frozen liquid. They are shipped out with blue ice unless customers require otherwise.

Description

Description	Recombinant Human Phosphatidylinositol 3-kinase catalytic subunit type 3 (PIK3C3) Fragment (aa 473-887) is a high-purity protein designed for studying the catalytic activity of the PI3K/PI4K domain. This fragment serves as an essential tool for investigating phosphatidylinositol 3-phosphate formation and its implications in autophagy, membrane trafficking, and viral replication research. The full-length Phosphatidylinositol 3-kinase catalytic subunit type 3 (PIK3C3), also known as hVps34, functions as the catalytic subunit of PI3K complexes that mediate the formation of phosphatidylinositol 3-phosphate. It plays critical roles in multiple membrane trafficking pathways: PI3KC3-C1 initiates autophagosome formation and promotes endoplasmic reticulum membrane curvature, while PI3KC3-C2 is involved in autophagosome maturation, endocytosis, and cytokinesis abscission. The protein is also required for transport from early to late endosomes and lysosomal enzyme trafficking. Subcellularly, it localizes to pre-autophagosome structures, endosomes, midbodies, and autophagosomes, with additional presence in ciliary structures. Notably, its kinase activity is essential for SARS-CoV-2 replication, highlighting its relevance in infectious disease research. The provided fragment (aa 473-887) encompasses the complete PI3K/PI4K catalytic domain (aa 605-871), enabling focused investigation of this enzyme's core functional mechanisms.