

Product Information

**PIP5K1A, active, GST-tagged, human
PRECISIO® Kinase
recombinant, expressed in *Sf9* cells**

Catalog Number **SRP5292**
Storage Temperature -70°C

Synonym: RP11-68I18.9

Product Description

PIP5K1A or phosphatidylinositol-4-phosphate 5-kinase 1 alpha phosphorylates phosphatidylinositol-4-phosphate to form phosphatidylinositol 4,5-bisphosphate. PIP5K1 is required for Wnt3a-induced LRP6 phosphorylation at Ser^{1,490} in mammalian cells.¹ Wnt3a stimulates the formation of phosphatidylinositol 4,5-bisphosphates through 'frizzled' and 'dishevelled', the latter of which directly interacts with and activates PIP5KI. PIP5K1A-mediated PIP₂ production is crucial for HIV-1 entry and the early steps of infection in permissive lymphocytes.² Overexpression of wild-type PI4P5K1A increases HIV-1 Env-mediated PIP₂ production and enhances viral replication in primary lymphocytes.

Recombinant full-length human PIP5K1A was expressed by baculovirus in *Sf9* insect cells using an N-terminal GST-tag. The PIP5K1A gene accession number is BC007833. It is supplied in 50 mM Tris-HCl, pH 7.5, 150 mM NaCl, 10 mM glutathione, 0.1 mM EDTA, 0.2 mM DTT, 0.1 mM PMSF, and 25% glycerol.

Molecular mass: ~86 kDa

Precautions and Disclaimer

This product is for R&D use only, not for drug, household, or other uses. Please consult the Material Safety Data Sheet for information regarding hazards and safe handling practices.

Storage/Stability

The product ships on dry ice and storage at -70°C is recommended. After opening, aliquot into smaller quantities and store at -70°C . Avoid repeated handling and multiple freeze/thaw cycles.

Figure 1.
SDS-PAGE Gel of Typical Lot:
 $\geq 70\%$ (SDS-PAGE, densitometry)

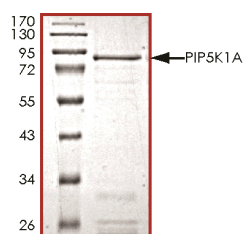
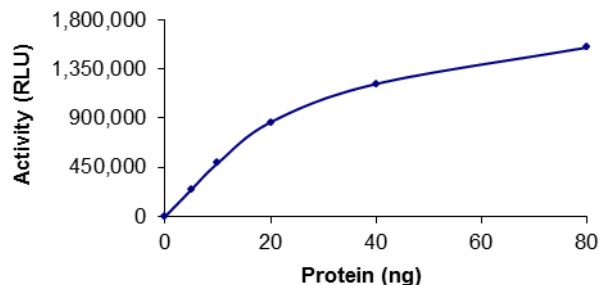


Figure 2.
Specific Activity of Typical Lot:
947–1,281 nmole/min/mg



Kinase activity was determined with a luminescent assay procedure.

References

1. Pan, W. et al., Wnt3a-mediated formation of phosphatidylinositol 4,5-bisphosphate regulates LRP6 phosphorylation. *Science*, **321**, 1350-1353 (2008).
2. Barrero-Villar, M., PI4P5-kinase Ialpha is required for efficient HIV-1 entry and infection of T cells. *J Immunol.*, **181**(10), 6882-8 (2008).

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