

# Certificate of Analysis

## PIK3C2G (PI3K-C2 gamma), 100 µg

PIK3C2G (468-1203), recombinant human, GST tagged

**ThermoFisher**  
SCIENTIFIC

**Part Number:** A32907

**Lot Number:** 2485829

**Immediate Storage:** -80°C

**Shipping Conditions:** dry ice

5781 Van Allen Way

Carlsbad, CA 92008

Phone: 760.603.7200

www.thermofisher.com

### Description:

Recombinant human active PIK3C2G (PI3K-C2 gamma) (468-1203) was expressed in insect cells using a N-terminal GST tag.

PIK3C2G (PI3K-C2 gamma) recombinant human (468-1203) was expressed in insect cells. PIK3C2G lipid kinase belongs to the phosphoinositide 3-kinase (PI3K) family which plays main roles in signaling pathways and involved in cell proliferation, oncogenic transformation, cell survival, cell migration, and intracellular protein trafficking. PIK3C2G contains a lipid kinase catalytic domain as well as a C-terminal C2 domain, a characteristic of class II PI3-kinases that act as calcium-dependent phospholipid binding motifs which mediate translocation of proteins to membranes, and may also mediate protein-protein interactions and the N-terminal region of PIK3C2G and the C-terminal C2 domain are required for enzymatic activity.

### Accession Number:

The gene accession number for PIK3C2G (PI3K-C2 gamma) is AAI30278.1.

### Specific Activity:

5,000 nmoles of ADP formed per min per mg of total protein using an ADP accumulation assay.

### Concentration:

0.1 mg/mL as determined by densitometry of the kinase gel band(s).

Calculated **905 nM**.

### Aliases:

PI3K-C2 gamma, MGC163149;

### Storage and Handling:

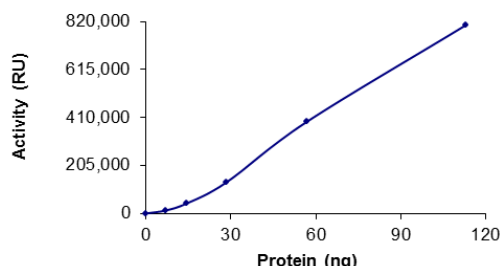
For maximum recovery please spin prior to use. Unless noted below, aliquots of the 5 µg, 10 µg and 20 µg sizes of kinase are not recommended as materials can be used in original packaging until exhausted. For larger sizes, the number of freeze/thaws may be reduced by preparing aliquots, aliquots below 20 µL are not recommended. **Please never store a kinase diluted.** If properly stored at -80°C, this product is guaranteed for 6 months from date of purchase.

### Storage Buffer:

50 mM Tris-HCl (pH 7.5), 150 mM NaCl, 10 mM Glutathione, 0.1 mM EDTA, 0.25 mM DTT, 0.1 mM PMSF and 25% Glycerol.

## QUALITY ASSURANCE

### PIK3C2G (PI3K-C2 gamma) Activity Graph



### Dilution Buffer:

25 mM HEPES (pH 7.5), 0.5 mM EGTA and 50 µM DTT.

### Assay Conditions:

PIK3C2G (PI3K-C2 gamma) was pre-diluted in enzyme dilution buffer and assayed in 50 mM HEPES (pH 7.5), 50 mM NaCl, 2 mM MgCl<sub>2</sub>, 0.5 mM EGTA, 25 µg/µL BSA, 0.04% Triton X-100 and 50 µM DTT with 50 µM ATP in an ADP accumulation assay using 50 µM Phosphatidylinositol (PI) substrate and 400 µM Phosphatidylserine (PS) substrate for 40 minutes at 30°C.

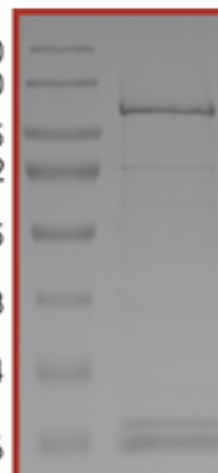
### Gel Information for PIK3C2G (PI3K-C2 gamma)

**Page Description:** Run on an SDS-PAGE gel and stained with Coomassie®.

**Lane 1:** Molecular Weight markers as labeled.

**Lane 2:** PIK3C2G (PI3K-C2 gamma)

170  
130  
95  
72  
55  
43  
34  
26



### Purity:

> 80% as determined by a Coomassie® blue stained SDS-PAGE gel, excluding endogenous GST.

### Molecular Weight:

110.5 kDa. Calculated from the protein sequence(s).

Protein sequence alignment with reference sequence(s)

GenBank Accession Number: AAI30278.1

1 MSPILGYWKIKGLVQPTRLLLEYLEEKYEHLVERDEGDKWRNKKFELGLEFPNLPYYIDGDVKLTQSMAIIRYIADKHNMLGGCPKERAIEISMLEGAVL GST  
1 MSPILGYWKIKGLVQPTRLLLEYLEEKYEHLVERDEGDKWRNKKFELGLEFPNLPYYIDGDVKLTQSMAIIRYIADKHNMLGGCPKERAIEISMLEGAVL Life PIK3C2G  
1 AAI30278.1

101 DIRYGVSRIAYS~~K~~FETLKVD~~F~~LSKLPEMLKMFEDRLCHKTYLNGDHVTHPDFMLYDALDVVLYMDPMCLDAFPKLVCFKKRIEAI~~P~~QIDKYLKSSKYIA  
101 DIRYGVSRIAYS~~K~~FETLKVD~~F~~LSKLPEMLKMFEDRLCHKTYLNGDHVTHPDFMLYDALDVVLYMDPMCLDAFPKLVCFKKRIEAI~~P~~QIDKYLKSSKYIA  
1 -----

201 WPLQGWQATFGGGDHPKSD  
201 WPLQGWQATFGGGDHPKSDLVPRGSQSS~~S~~SAKGLIEKVTTTELSTSIYQLINVYCNSFYADFQPVNVPRCTSYLN~~P~~GLPSHLSFTVYAAHNIPETWVHR  
1 -----IEKVTTTELSTSIYQLINVYCNSFYADFQPVNVPRCTSYLN~~P~~GLPSHLSFTVYAAHNIPETWVHR

220  
301 INFPLEIKSLPRESMLTVKLFGIACATNNANLLAWTCLPLFPKEKSILGSM~~L~~FSMTLQSEPPVEMITPGVWDVSQSPVTLQIDFPATGWEYMKPDSEEN  
65 INFPLEIKSLPRESMLTVKLFGIACATNNANLLAWTCLPLFPKEKSILGSM~~L~~FSMTLQSEPPVEMITPGVWDVSQSPVTLQIDFPATGWEYMKPDSEEN

220  
401 RSNLEEPLKECIKH~~I~~ARLSQKQTP~~L~~LLSEEKKRYLWFYFYC~~N~~NENC~~S~~LPLVLGSAPGWDERTVSEMH~~T~~ILRRWTF~~S~~QPLEALGLLTS~~S~~FPDQEIRKVAV  
165 RSNLEEPLKECIKH~~I~~ARLSQKQTP~~L~~LLSEEKKRYLWFYFYC~~N~~NENC~~S~~LPLVLGSAPGWDERTVSEMH~~T~~ILRRWTF~~S~~QPLEALGLLTS~~S~~FPDQEIRKVAV

220  
501 QQLDNLLNDELLEYLPQLVQAVKF~~E~~WNLESPLVQ~~L~~LLHRS~~L~~QSIQVAHRLY~~W~~LLKNAENAYFKSWYQKLLAALQFCAGKALNDEF~~S~~KEQKL~~I~~KILGDIG  
265 QQLDNLLNDELLEYLPQLVQAVKF~~E~~WNLESPLVQ~~L~~LLHRS~~L~~QSIQVAHRLY~~W~~LLKNAENAYFKSWYQKLLAALQFCAGKALNDEF~~S~~KEQKL~~I~~KILGDIG

220  
601 ERVKASDHQRQEVLKKEIGRLEE~~F~~FQDVNTCHLPLNPALCIKGIDHDACS~~Y~~FTSNALPLKITFINANLMGKNIS~~I~~IFKAGDDLQDMLVLQ~~I~~QVMDNI  
365 ERVKASDHQRQEVLKKEIGRLEE~~F~~FQDVNTCHLPLNPALCIKGIDHDACS~~Y~~FTSNALPLKITFINANLMGKNIS~~I~~IFKAGDDLQDMLVLQ~~I~~QVMDNI

220  
701 WLQEG~~L~~DMQMI~~I~~YRCLSTGKDQGLVQMPDAVTLAKIHRHSG~~L~~IGPLKENTIKKWF~~S~~QHNHLKADYEKALRNFFYSCAGWC~~V~~VTFILGVCDRHNDNI~~M~~LT  
465 WLQEG~~L~~DMQMI~~I~~YRCLSTGKDQGLVQMPDAVTLAKIHRHSG~~L~~IGPLKENTIKKWF~~S~~QHNHLKADYEKALRNFFYSCAGWC~~V~~VTFILGVCDRHNDNI~~M~~LT

220  
801 KSGHMFHIDFGKFLGHAQTGGIKRDRAPFIFTSEMEYFITEGGKNPQH~~F~~QDFVELCCRAYNIIRKHSQ~~L~~LLNLE~~M~~MLYAGLP~~E~~LSGIQDLKYVYNNLR  
565 KSGHMFHIDFGKFLGHAQTGGIKRDRAPFIFTSEMEYFITEGGKNPQH~~F~~QDFVELCCRAYNIIRKHSQ~~L~~LLNLE~~M~~MLYAGLP~~E~~LSGIQDLKYVYNNLR

220  
901 PQD~~T~~DL~~E~~ATSHFTKKIKESLECFPVKLNNLIHTLAQMSAISPAKSTSQTFFQESCLLSTTRS  
665 PQD~~T~~DL~~E~~ATSHFTKKIKESLECFPVKLNNLIHTLAQMSAISPAKSTSQTFFQESCLLSTTRS

\* highlighted residues denote differences from the reference protein sequence(s).

Rachel Smith

Rachel Smith, Manager, QA/QC

Date: 02/Mar/2022

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