

Certificate of Analysis

PIK3C2G (PI3K-C2 gamma), 20 µg

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

ThermoFisher
SCIENTIFIC

Part Number: A31081

Lot Number: 3142863

Immediate Storage: -80°C

Shipping Conditions: dry ice

5781 Van Allen Way

Carlsbad, CA 92008

Phone: 760.603.7200

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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:

3,740 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:

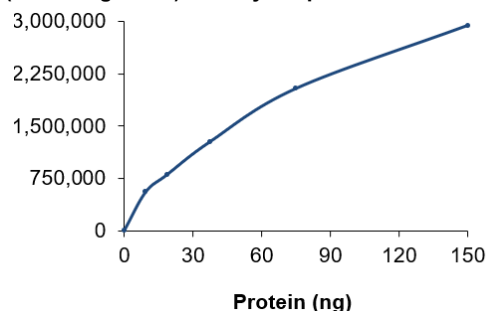
For maximum recovery please spin prior to use. Unless noted below, aliquots of the 5 µg, 10µg and 20µg sizes of kinase are not recommended as materials can be used in original packaging until exhausted. For larger sizes, the number of freeze/thaws may be reduced by preparing aliquots, aliquots below 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 MgCl₂, 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.

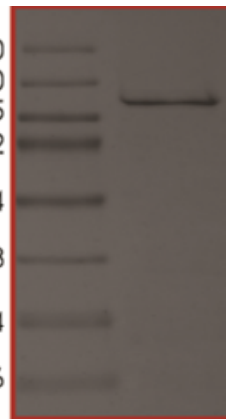
Gel Information for PIK3C2G (PI3K-C2 gamma)

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
54
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 MSPILGYWKIGLVQPTRLLLEYLEEKYEEHLYERDEGDKWRNKKFELGLEFPNLPYYIDGDVKLTQSMAIIRYIADKHNMLGGCPKERAIEISMLEGAVL GST
1 MSPILGYWKIGLVQPTRLLLEYLEEKYEEHLYERDEGDKWRNKKFELGLEFPNLPYYIDGDVKLTQSMAIIRYIADKHNMLGGCPKERAIEISMLEGAVL Life PIK3C2G
1 ----- AAI30278.1

101 DIRYGVSRIAYSQDFETLKVDFLSKLPEMLKMFEDRLCHKTYLNGDHVTHPDFMLYDALDVVLYMDPMCLDAFPKLVCFKKRIEAIPIQIDKYLKSSKYIA
101 DIRYGVSRIAYSQDFETLKVDFLSKLPEMLKMFEDRLCHKTYLNGDHVTHPDFMLYDALDVVLYMDPMCLDAFPKLVCFKKRIEAIPIQIDKYLKSSKYIA
1 -----

201 WPLQGWQATFGGGDHPKSD
201 WPLQGWQATFGGGDHPKSDLVPRGSQSSSETSAKGLIEKVTTTELSTSIYQLINVYCNSFYADFQPVNVPRCTSYLNPGLP SHLSFTVYAAHNIPETWVHR
1 ----- IEKVTTTELSTSIYQLINVYCNSFYADFQPVNVPRCTSYLNPGLP SHLSFTVYAAHNIPETWVHR

220
301 INFPLEIKSLPRESMLTVKLFGIACATNNANLLAWTCLPLFPKEKSIILGSMFLSMTLQSEPPVEMITPGVWDVVSQSPVTLQIDFPATGWEYMKPDSEEN
65 INFPLEIKSLPRESMLTVKLFGIACATNNANLLAWTCLPLFPKEKSIILGSMFLSMTLQSEPPVEMITPGVWDVVSQSPVTLQIDFPATGWEYMKPDSEEN

220
401 RSNLEEPLKECIKHIA RL SQKQTP LLLSEEKKRYLWYFYC NNENCS LPLVLGSAPGWDERTVSEMH TILRRWTF SQPLEALGLLTSSFPDQEIRKVAV
165 RSNLEEPLKECIKHIA RL SQKQTP LLLSEEKKRYLWYFYC NNENCS LPLVLGSAPGWDERTVSEMH TILRRWTF SQPLEALGLLTSSFPDQEIRKVAV

220
501 QQLDNLLNDELLEYLPQLVQAVKFEWNLESPLVQLLLHRSLSQIQVAHRLYWLKNAENAYFKSWYQKLLAALQFCAGKALNDEF SKEQKLIKILGDIG
265 QQLDNLLNDELLEYLPQLVQAVKFEWNLESPLVQLLLHRSLSQIQVAHRLYWLKNAENAYFKSWYQKLLAALQFCAGKALNDEF SKEQKLIKILGDIG

220
601 ERVKASD HQREVLKKEIGRLEEFFQDVNTCHLPLNPALCIKGIDHACSYFTSNALPLKITFINANLMGKNISIIIFKAGDDL RQDMLVLQLIQVMDNI
365 ERVKASD HQREVLKKEIGRLEEFFQDVNTCHLPLNPALCIKGIDHACSYFTSNALPLKITFINANLMGKNISIIIFKAGDDL RQDMLVLQLIQVMDNI

220
701 WLQEGLDQMIIYRCLSTGKDQGLVQMPDAVTLAKIHRHSGLIGPLKENTIKKWF SQHNHLKADYEKALRNFFYS CAGWCVVTFILGVCDRHNDNI MLT
465 WLQEGLDQMIIYRCLSTGKDQGLVQMPDAVTLAKIHRHSGLIGPLKENTIKKWF SQHNHLKADYEKALRNFFYS CAGWCVVTFILGVCDRHNDNI MLT

220
801 KSGHMFHIDFGKFLGHAQTGGIKRDRAPFI FTSEMEYFITEGGKNPQH QDFVELCCRAYNIIRKHSQ LLLN LEMMLYAGLP ELSG IQDLKYVYNNLR
565 KSGHMFHIDFGKFLGHAQTGGIKRDRAPFI FTSEMEYFITEGGKNPQH QDFVELCCRAYNIIRKHSQ LLLN LEMMLYAGLP ELSG IQDLKYVYNNLR

220
901 PQD TDLEATSHFTKKIKESLECFPVKLNLIHTLAQMSAISP AKSTSQTFFQESCLLSTTRS
665 PQD TDLEATSHFTKKIKESLECFPVKLNLIHTLAQMSAISP AKSTSQTFFQESCLLSTTRS

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



Chevoyn Joseph, Director, Quality

Date: 26/Sep/2024

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