Supplemental Figure 1. **Regulation of wild-type and spPH mutants of PLCγ1 and PLCγ2 by ΔN-Vav1.**

COS-7 cells were cotransfected as indicated with empty vector (*Control*), vectors encoding wild-type Rac2 (250 ng per well), ΔN-Vav1 (500 ng per well), and/or wild-type or mutant PLCγ isozymes. The amounts of vectors encoding the PLCγ isozymes were adjusted according to their basal activities shown in the left panel of Fig. 3B and Fig. 7B: PLCγ1-111, 300 ng per well; PLCγ2-222, 1000 ng per well; PLCγ1-122, 10 ng per well; PLCγ2-211, 1000 ng per well, and PLCγ2-F897Q, 1000 ng per well. The total amount of DNA was maintained constant at 1.75 μg per well in each transfection by adding empty vector. *Top panel*, cells from one well were lysed in 200 μl of SDS-PAGE sample preparation buffer. An aliquot (25 μl) of the lysate was subjected to SDS-PAGE, and immunoblotting was performed using an antibody reactive with the *c*-myc epitope. In additional experiments (results not shown), it was found that PLCγ1-122 was in fact present, albeit at much lower levels in transfected COS-7 cells, and that ΔN-Vav 1 was present at the same level in cells transfected with the corresponding vector.

Supplemental Figure 2. **Membrane localization of chimeric PLCγ proteins.**

COS-7 cells were seeded on 10 cm cell culture plates (2 x 10^6 cells/plate) and transfected with 15 μg per plate of vector encoding wild-type PLCγ1 (*1-111*), wild-type PLCγ2 (*2-222*) or the chimeric mutants PLCγ1-121 (*1-121*), PLCγ1-112 (*1-112*), PLCγ1-122 (*1-122*), PLCγ2-212 (*2-212*), PLCγ2-221 (*2-221*), or PLCγ2-211 (*2-211*). All PLCγ polypeptides contain a c-*myc* epitope tag at their carboxyl terminus. Forty-eight hours after transfection, the cells were harvested, homogenized, and fractionated into postnuclear soluble (*S*) and particulate (*P*) constituents. Aliquots of the fractions containing 50 μg of protein were subjected to SDS-PAGE, and immunoblotting was performed using antibodies reactive against the c-*myc* epitope (*PLCγ*) and $Gβ_{1-4}$ (*Gβ*) as a marker for the particulate fraction containing plasma membranes of transfected cells.

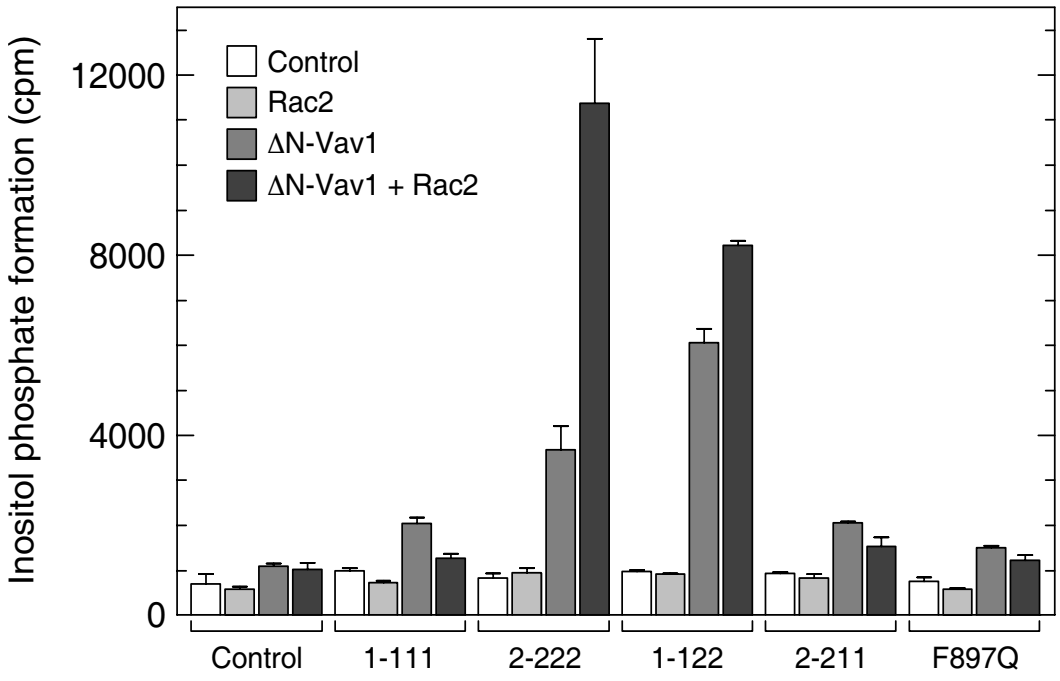
Inositol phosphate formation (cpm)
12000
8000
4000
0
Control
Rac2
ΔN-Vav1
ΔN-Vav1 + Rac2
Control
1-111
2-222
1-122
2-211
F897Q

Figure S1

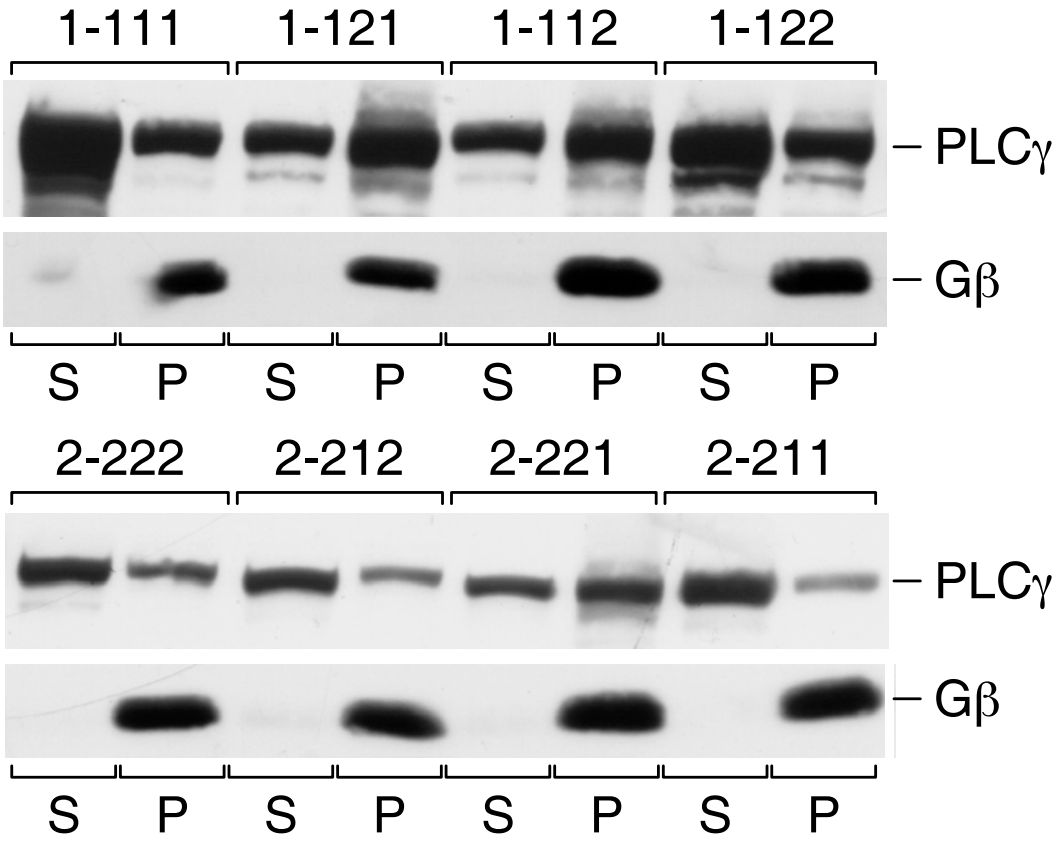
1-111
1-121
1-112
1-122
PLCγ
Gβ
S P S P S P S P
2-222
2-212
2-221
2-211
PLCγ
Gβ
S P S P S P S P

Figure S2