

**Table S1. Plasmids used in this study.**

Plasmid	Description	Reference
pcDNA3.1/Zeo(+-)B55 $\alpha$ -HA	Cloned by PCR-based method; see the supplementary materials and methods	this study
pcDNA3.1/Zeo(+-)B55 $\beta$ -HA	Cloned by PCR-based method; see the supplementary materials and methods	this study
pcDNA3.1/Zeo(+-)B55 $\beta\alpha\beta$ -HA	Cloned by PCR-based method; see the supplementary materials and methods	this study
pcDNA3.1/Zeo(+-)B55 $\beta$ 2-HA	Cloned by PCR-based method; see the supplementary materials and methods	this study
pcDNA5/TO-Flag-B55 $\beta$ 2mut (RR168EE)	Provided by Dr. Stefan Strack, University of Iowa, USA	Dagda <i>et al.</i> , 2003
pcDNA3.1/Zeo(+-)B55 $\delta$ -HA	Cloned by PCR-based method; see the supplementary materials and methods	this study
pcDNA3.1/Zeo(+-)B56 $\gamma$ 3-HA	Cloned by PCR-based method	Lee <i>et al.</i> , 2010
pHM6-HA-PP2A $\alpha$	pHM6 with HA-tagged human PP2A $\alpha$	Chuang <i>et al.</i> , 2000
pcDNA5/TO-Flag- $\alpha$ 4	pcDNA5/TO with FLAG-tagged $\alpha$ 4	McConnell <i>et al.</i> , 2010
pcDNA5/TO-Flag- $\alpha$ 4mut(R155E/K158D)	pcDNA5/TO with FLAG-tagged $\alpha$ 4(R155E/K158D)	McConnell <i>et al.</i> , 2010
pCMV5-small T wt	pCMV5 with SV40 Small t antigen	Sontag <i>et al.</i> , 1993
pCMV5-small T mut	pCMV5 with mutant SV40 Small t antigen (1-110)	Sontag <i>et al.</i> , 1993
pcDNAI/Amp YFP-N (1-158)	pcDNAI/Amp with YFP (1-158)	Hynes <i>et al.</i> , 2004
pcDNAI/Amp YFP-C (159-238)	pcDNAI/Amp with YFP (159-238)	Hynes <i>et al.</i> , 2004
pBiFC-bFosYC155	pCMV-HA-YFP-C(155-238) with bFos	Hu <i>et al.</i> , 2002
pBiFC-bJunYN155	pFLAG-CMV2-YFP-N (1-154) with bJun	Hu <i>et al.</i> , 2002
pFLAG-CMV2-YN	Derived from pBiFC-bFosYC155 by cutting out bFos	this study
pCMV-HA-YC	Derived from pBiFC-bFosYC155 by cutting out bFos	this study
pcDNAI-YN A $\alpha$ (encoding YN-A $\alpha$ )	pcDNAI/Amp YN with PP2A/A $\alpha$ ; see the supplementary materials and methods	this study
pcDNAI-YC A $\alpha$ (encoding YC-A $\alpha$ )	pcDNAI/Amp YN with PP2A/A $\alpha$ ; see the supplementary materials and methods	this study
pcDNAI-YN B55 $\alpha$ -HA (encoding YN-B55 $\alpha$ )	pcDNAI/Amp YN with HA-tagged PP2A/B55 $\alpha$ ; see the supplementary materials and methods	this study

pcDNAI-YC B55 $\alpha$ -HA(encoding YC-B55 $\alpha$ )	pcDNAI/Amp YC with HA-tagged PP2A/B55 $\alpha$ ; see the supplementary materials and methods	this study
pcDNAI-YN FLAG-B55 $\beta$ 1(encoding YN-B55 $\beta$ 1)	pcDNAI/Amp YN with FLAG-tagged PP2A/B55 $\beta$ 1; see the supplementary materials and methods	this study
pcDNAI-YC FLAG-B55 $\beta$ 1(encoding YC-B55 $\beta$ 1)	pcDNAI/Amp YC with FLAG-tagged PP2A/B55 $\beta$ 1; see the supplementary materials and methods	this study
pcDNAI-YN FLAG-B55 $\beta$ 2(encoding YN-B55 $\beta$ 2)	pcDNAI/Amp YN with FLAG-tagged PP2A/B55 $\beta$ 2; see the supplementary materials and methods	this study
pcDNAI-YC FLAG-B55 $\beta$ 2(encoding YC-B55 $\beta$ 2)	pcDNAI/Amp YC with FLAG-tagged PP2A/B55 $\beta$ 2; see the supplementary materials and methods	this study
pcDNAI-YN FLAG-B55 $\beta$ $\alpha$ $\beta$ (encoding YN-B55 $\beta$ $\alpha$ $\beta$ )	pcDNAI/Amp YN with FLAG-tagged PP2A/B55 $\beta$ $\alpha$ $\beta$ ; see the supplementary materials and methods	this study
pcDNAI-YC FLAG-B55 $\beta$ $\alpha$ $\beta$ (encoding YC-B55 $\beta$ $\alpha$ $\beta$ )	pcDNAI/Amp YC with FLAG-tagged PP2A/B55 $\beta$ $\alpha$ $\beta$ ; see the supplementary materials and methods	this study
pcDNAI-YN FLAG-B55 $\beta$ 2mut(encoding YN-B55 $\beta$ 2mut)	pcDNAI/Amp YN with FLAG-tagged PP2A/B55 $\beta$ 2mut (RR168EE); see the supplementary materials and methods	this study
pcDNAI-YC FLAG-B55 $\beta$ 2mut (encoding YC-B55 $\beta$ 2mut)	pcDNAI/Amp YC with FLAG-tagged PP2A/B55 $\beta$ 2mut (RR168EE); see the supplementary materials and methods	this study
pcDNAI-YN FLAG-B55 $\delta$ (encoding YN-B55 $\delta$ )	pcDNAI/Amp YN with FLAG-tagged PP2A/B55 $\delta$ ; see the supplementary materials and methods	this study
pcDNAI-YC FLAG-B55 $\delta$ (encoding YC-B55 $\delta$ )	pcDNAI/Amp YC with FLAG-tagged PP2A/B55 $\delta$ ; see the supplementary materials and methods	this study
pcDNAI-YN B56 $\gamma$ 3-HA(encoding YN-B56 $\gamma$ 3)	pcDNAI/Amp YN with HA-tagged PP2A/B56 $\gamma$ 3; see the supplementary materials and methods	this study

pcDNAI-YC-B56γ3-HA(encoding YC -B56γ3)	pcDNAI/Amp YN with HA-tagged PP2A/B56γ3; see the supplementary materials and methods	this study
pcDNAI-YN-PP2A $\alpha$ (encoding YN-PP2A $\alpha$ )	pcDNAI/Amp YN with PP2A $\alpha$ ; see the supplementary materials and methods	this study
pcDNAI-YC-PP2A $\alpha$ (encoding YC-PP2A $\alpha$ )	pcDNAI/Amp YC with PP2A $\alpha$ ; see the supplementary materials and methods	this study
pCMV2-FLAG-A $\alpha$ -YN(encoding A $\alpha$ -YN)	pCMV2-FLAG-YN with PP2A A $\alpha$	this study
pCMV-HA-A $\alpha$ -YC(encoding A $\alpha$ -YC)	pCMV-HA-YC with PP2A A $\alpha$	this study
pCMV2-FLAG-B55β1-YN(encoding B55β1-YN)	pCMV2-FLAG-YN with PP2A B55β1	this study
pCMV-B55β1-HA-YC(encoding B55β1-YC)	pCMV-HA-YC with PP2A B55β1	this study
pCMV2-FLAG-B55β $\alpha\beta$ -YN(encoding B55β $\alpha\beta$ -YN)	pCMV2-FLAG-YN with PP2A B55β $\alpha\beta$	this study
pCMV-B55β $\alpha\beta$ -HA-YC(encoding B55β $\alpha\beta$ -YC)	pCMV-HA-YC with PP2A B55β $\alpha\beta$	this study
pCMV2-FLAG-B55β2-YN(encoding B55β2-YN)	pCMV2-FLAG-YN with PP2A B55β2	this study
pCMV-B55β2-HA-YC(encoding B55β2-YC)	pCMV-HA-YC with PP2A B55β2	this study
pCMV2-FLAG-B55β2mut-YN(encoding B55β2mut -YN)	pCMV2-FLAG-YN with PP2A B55β2mut(RR168EE)	this study
pCMV-B55β2mut -HA-YC(encoding B55β2mut-YC)	pCMV-HA-YC with PP2A B55β2 mut (RR168EE)	this study
pCMV2-FLAG-B55δ-YN(encoding B55δ-YN)	pCMV2-FLAG-YN with PP2A B55δ	this study
pCMV-HA-B55δ-YC(encoding B55δ-YC)	pCMV-HA-YC with PP2A B55δ	this study
pCMV2-FLAG-PP2A $\alpha$ -YN(encoding PP2A $\alpha$ -YN)	pCMV2-FLAG-YN with PP2A $\alpha$	this study
pCMV-HA-PP2A $\alpha$ -YC(encoding PP2A $\alpha$ -YC)	pCMV-HA-YC with PP2A $\alpha$	this study
pcDNAI/Amp YN-MYC- $\alpha$ 4(encoding YN- $\alpha$ 4)	pcDNAI/Amp YN with MYC-tagged $\alpha$ 4	this study
pcDNAI/Amp YC- $\alpha$ 4mut(encoding YC- $\alpha$ 4 mut)	pcDNAI/Amp YN with MYC-tagged $\alpha$ 4mut (R155E/K158D)	this study

pCMV-MYC- $\alpha$ 4-YC(encoding $\alpha$ 4-YC)	pCMV-HA-YC with MYC tagged- $\alpha$ 4	this study
pCMV-MYC- $\alpha$ 4mut-YC(encoding $\alpha$ 4mut-YC)	pCMV-HA-YC with MYC tagged- $\alpha$ 4 mut(R155E/K158D)	this study
pECFP-C1-PP2A $\alpha$ (encoding CFP-PP2A $\alpha$ )	pECFP-C1 with PP2A $\alpha$	This study
pECFP-N1-FLAG-B55 $\beta$ 2(encoding CFP-B55 $\beta$ 2)	pECFP-N1 with FLAG-tagged B55 $\beta$ 2	This study
pECFP-N1-FLAG-B55 $\beta$ 2mut(encoding CFP-B55 $\beta$ 2mut)	pECFP-N1 with FLAG-tagged B55 $\beta$ 2 mut (RR168EE)	This study

### Table S1 References

- Dagda RK, Zaucha JA, Wadzinski BE, Strack S (2003) A developmentally regulated, neuron-specific splice variant of the variable subunit Bbeta targets protein phosphatase 2A to mitochondria and modulates apoptosis. *J Biol Chem.* **278**:24976-24985
- Lee TY, Lai TY, Lin SC, Wu CW, Ni IF, Yang YS, Hung LY, Law BK, Chiang CW (2010) The B56gamma3 regulatory subunit of protein phosphatase 2A (PP2A) regulates S phase-specific nuclear accumulation of PP2A and the G1 to S transition. *J Biol Chem.* **285**:21567-21580
- Chuang E, Fisher TS, Morgan RW, Robbins MD, Duerr JM, Vander Heiden MG, Gardner JP, Hambor JE, Neveu MJ, Thompson CB (2000) The CD28 and CTLA-4 receptors associate with the serine/threonine phosphatase PP2A. *Immunity* **13**:313-322
- McConnell JL, Watkins GR, Soss SE, Franz HS, McCorvey LR, Spiller BW, Chazin WJ, Wadzinski BE (2010) Alpha4 is a ubiquitin-binding protein that regulates protein serine/threonine phosphatase 2A ubiquitination. *Biochemistry* **49**:1713-1718
- Sontag E, Fedorov S, Kamibayashi C, Robbins D, Cobb M, Mumby M (1993) The interaction of SV40 small tumor antigen with protein phosphatase 2A stimulates the map kinase pathway and induces cell proliferation. *Cell* **75**:887-897
- Hynes TR, Tang L, Mervine SM, Sabo JL, Yost EA, Devreotes PN, Berlot CH (2004) Visualization of G protein betagamma dimers using bimolecular fluorescence complementation demonstrates roles for both beta and gamma in subcellular targeting. *J Biol Chem.* **279**:30279-30286
- Hu CD, Chinenov Y, Kerppola TK (2002) Visualization of interactions among bZIP and Rel family proteins in living cells using bimolecular fluorescence complementation. *Mol Cell.* **9**:789-98