

## SUPPLEMENTAL FIGURE LEGENDS

**Figure S1:** Alignment of cluster 1 and cluster 2 raptor phosphorylation sites from various organisms using the algorithm Clustal V. Identical residues are highlighted in grey.

**Figure S2: Wild type (WT) and S863A Myc-raptor interact with mTORC1 partner proteins similarly.** HEK293 cells were co-transfected with WT or S863A Myc-raptor [0.5  $\mu$ g], HA-GBL [0.5  $\mu$ g], and AU1-mTOR [4  $\mu$ g], serum-deprived, stimulated with insulin, and lysed in Buffer B/Chaps. Myc-raptor was immunoprecipitated from WCL and immunoblotted with the indicated antibodies. WCL was also immunoblotted directly to confirm expression of the transfected proteins as well as the expected activation of mTORC1 signaling. Note: Insulin-induced destabilization of the mTOR-raptor co-immunoprecipitation is more prominent when cells are lysed in Buffer B/Chaps relative to Buffer A/Chaps.

**Cluster 1: S696/T706**

	Y P L P S P A X T E G G S L T P V R D S P C T P R L R S V S S Y G N I R A V X T	Majority
	*            1130            *            1140            1150            1160	
692	Y A L P S P A T T E G G S L T P V R D S P C T P R L R S V S S Y G N I R A V A T	H. sapiens
692	Y P L P S P A A T E G G S L T P V R D S P C T P R L R S V S S Y G N I R A V T T	R. norvegicus
692	Y P L P S P A A T E G G S L T P V R D S P C T P R L R S V S S Y G N I R A V T T	M. musculus
866	- - M R G H V S A A S F V M C P D P R D L - T S S T H S L E R H V T I R R G A S	D. melanogaster
924	K L P R K R N S S E N L S E Q G L D I A A E M P S N H R R P R A P P V N E F M Q	C. elegans
852	Q Q Q Q H L E Q Q Q M K I E K Q I R H - - C Q V M Q N Q L E V I - D L R K L K R	S. cerevisiae

S696
T706

**Cluster 2: S855/S859/S863/S877**

	- - - - - A Y K A T V N A R - - - - - P Q R X L D T S - - - - S L T	Majority
	1290            1300            1310            * 1320	
838	- - - - - A Y K A T V N A R - - - - - P Q R V L D T S - - - - S L T	H. sapiens
838	- - - - - A Y K A T V N A R - - - - - P Q R I L D T S - - - - S L T	R. norvegicus
838	- - - - - A Y K A T V N A R - - - - - P Q R I L D T S - - - - S L T	M. musculus
986	- - - - R D T A L C P I M A A K - - - - - E A T M A N A S E K C S S L S	D. melanogaster
1071	N I D N T M A H L S R K M I A R K N S K A T V E M P R K P V G P S E E V S T L S	C. elegans
994	- - - - L L E L S A H K E L G G - - - - - P F A V M E K F L - - - - L K	S. cerevisiae

S855

	Q S A P A S - P T N K G M H I H Q V G G - - - - - S P P A S S T S S X S	Majority
	*            *            1330            1340            1350            1360	
858	Q S A P A S - P T N K G V H I H Q A G G - - - - - S P P A S S T S S S S	H. sapiens
858	Q S A P A S - P T N K G M H I H Q V G G - - - - - S P P A S S T S S C S	R. norvegicus
858	Q S A P A S - P T N K G M H M H Q V G G - - - - - S P P A S S T S S C S	M. musculus
1013	V S L P P S - P N T R V N Y L G G G G A P G G A G A T A E S P P V G A A A S G A	D. melanogaster
1111	E R I K R N L E V E K E S G V S A D G I D F T K L N M Q K A K E Q R K G G K G G	C. elegans
1017	R S S K A H - Q T G K - F G F N S S Q V Q F V K S S L R S F S P N E R V D N N A	S. cerevisiae

S859
S863
S877

# Foster\_Figure S2

