## Cyclic GMP inhibited phosphodiesterase B — [Phosphorylation] **Biological Network** of PDE3B RAC-beta serine/threonine-protein kinase PhosphatidyLinositol-3,4,5-trisphosphate Phosphorylation of GTP loading by Rheb Phosphorylation of complexed TSC2 by PKB TSC2 by PKB FKBP12-rapamycin complex-associated protein Rheb:GDP Activated mTORC1 PIP3:Phosphorylated PKB complex Inhibition of TSC complex Formation of active formation by PKB TSC1:TSC2 TSC1:Inhibited TSC2-1-P mTORC1 complex └─ GTP-binding protein Rheb precursor Legend: Small Molecule **Special Molecules** S6K1-mediated Protein **Biochemical Reaction** signalling Activation of S6K1 Complex Catalysis Phosphorylation and inactivation of eEF2K by activated S6K1 Rib<mark>psoma</mark>l protein S6 kinase beta-1 mTORC1-mediated signalling S6K1 (O Eukaryotic translation initiation factor 4E-binding protein 1 Phosphorylation of Ribosomal signalling Eukaryotic translation initiation factor 4E protein S6 by activated S6K1 Release Elongation factor 2 kinase 405 ribosomal protein 56 of eIF4E Phosphorylation and activation of eIF4G by activated S6K1 **mTOR** eIF4E:4E-BP eIF4E:4E-BP1-P Eukaryotic translation initiation factor 4B Eukaryotic translation initiation factor 4 gamma 1 signalling Dissociation of phosphorylated Phosphorylation and activation of eIF4B by activated S6K1 4EBP1 from eIF4E

Phosphorylation of 4E-BP1

by activated mTORC1