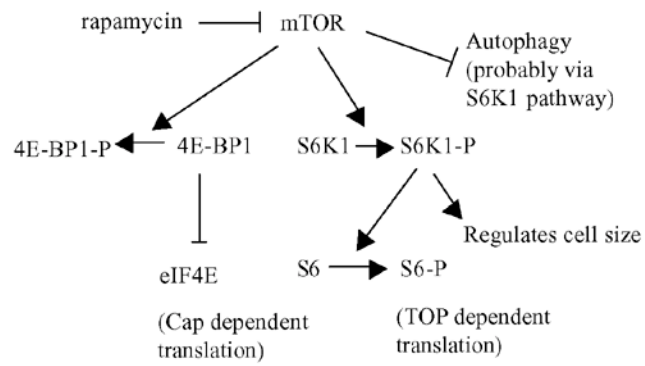


Figure 1



Supplementary figure 1

Schematic representation of mTOR signalling pertinent to this paper.

mTOR is an important signalling molecule that regulates diverse cellular functions. Rapamycin is a specific inhibitor of mTOR function. mTOR phosphorylates at least two downstream substrates, namely translation initiation factor eIF-4E binding protein-1 (4E-BP1) and ribosomal protein S6 kinase-1 (S6K1). 4E-BP1 and S6K1 are important regulators of cap-dependent and terminal oligopyrimidine tract (TOP)-dependent translation, respectively. Phosphorylation of S6K1 results in its activation and subsequent phosphorylation of S6. Phosphorylation of 4E-BP1 on the other hand results in its dissociation from eIF-4E and thus leads to the activation of cap-dependent translation. mTOR is known to negatively regulate autophagy, probably via the S6K1 pathway. Inhibition of mTOR by rapamycin induces autophagy. S6K1 is also a key regulator of cell size.