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PfVps34      IINNLSYDKSYHSYYNSQFIKTLQNSFESTTSLNYHYNFLKCSNNNIFYKNKKIERIKPN 1740
PfVps34      tsiqkafpsnenilnrnqhvyysnngivhnikmknkhkrddyminkevlpcvnsnscldgk 1800
PfVps34      lmpshdkmrsshdkmmpshdkmmpshdklmsphytlmsshdkpvapsgvsslgkkskde 1860

ScVps34      -----MFKVGDDLQRDQLVVQIISLMNELLKNENVDLKLTPTYKILAT 663
PfVps34      KKNRKKYNEIYQLSIKKYIYKAGDDLQRDHLVIQIIYVMDNIWKRYGLDLKMTLYRVLAL 1920

ScVps34      GPQEGAIIEFIPNDTLASILSKYHG--ILGYLKLHYPDENATLGVQGWLDNFVKSCAGYC 721
PfVps34      STDDGFIEFVDYAESISISIKKNYKGEIRQYFIDNSTCSSSPPLGFDTEILQNFISSCAGYS 1980

ScVps34      VITYILGVGDRHLDNLLVTPDGHFFHADFGYILGQDPKPFPPMLKLPPIIEAFGGAESS 781
PfVps34      VITYILGIGDRHLDNLMVTKDGRFFHIDFGYIFGEDPKPFSPMKLCKEMIEAMGGAHSI 2040

ScVps34      NYDKFRSYCFVAYSILRRNAGLILNLFELMKTSNIPDIRIDPNGAILRVRERFNLMSEEE 841
PfVps34      GYEQFLKKCLAYKYLRYSQLIISLLDAMCDAGLKDMMKMSPELVCVLKVQEKFRLLDNDE 2100

ScVps34      DATVHFQNLINDSVNALLPIVIDHLHNLAQYWRT 875
PfVps34      AA EIYFLSVINASVKTLFPVVVDKLEHWALNWK- 2133

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Figure S2. Sequence alignment of Vps34 proteins. The yeast (ScVps34) and *P. falciparum* (PfVps34) Vps34 protein sequences were aligned using the Clustal W2 program. Shown are the conserved residues (red), the putative N-terminal lipid binding C2 domain of the ScVps34 (underlined), phosphatidylinositol 3-phosphate kinase accessory (PI3Ka) domain of unknown function (yellow shaded), phosphatidylinositol 3-kinase domain (grey shaded bold letters), and PfVps34-specific large inserts (lower case).