**Supporting Information S1.**

NP\_031399.2- Homo sapiens, XP\_521602.2- Pan troglodytes, XP\_864622.1- Canis familiaris, NP\_001095413.1-Bos taurus, NP\_062632.2-Mus musculus] NP\_001013173.1-Rattus norvegicus, NP\_001026407.1-Gallus gallus, NP\_001038251.1-Danio rerio, NP\_650620.3- Drosophila melanogaster, NP\_741391.2 - Caenorhabditis elegans, NP\_174809.1-Arabidopsis thaliana, NP\_001064062.1-Oryza sativa, XP\_002572767.1 - Schistosoma mansoni, NP\_001080350.1-Xenopus laevis, XP\_003249714.1-Apis mellifera, EFN66969.1 - Camponotus floridanus, NP\_001026407.1-Gallus gallus, XP\_001649425.1-Aedes aegypti, NP\_001244517.1-Macaca mulatta, XP\_003218575.1-Anolis carolinensis, ZP\_05038290.1-Synechococcus sp., XP\_002585418.1- Plasmodium falciparum. Accession number of Shoc2 orthologues in databases (EMBL and NCBI). Xenopus laevis Shoc2 amino acid sequences and nucleotide sequences were obtained through http://genome.jgi-psf.org/Xentr4/Xentr4.home.html.