

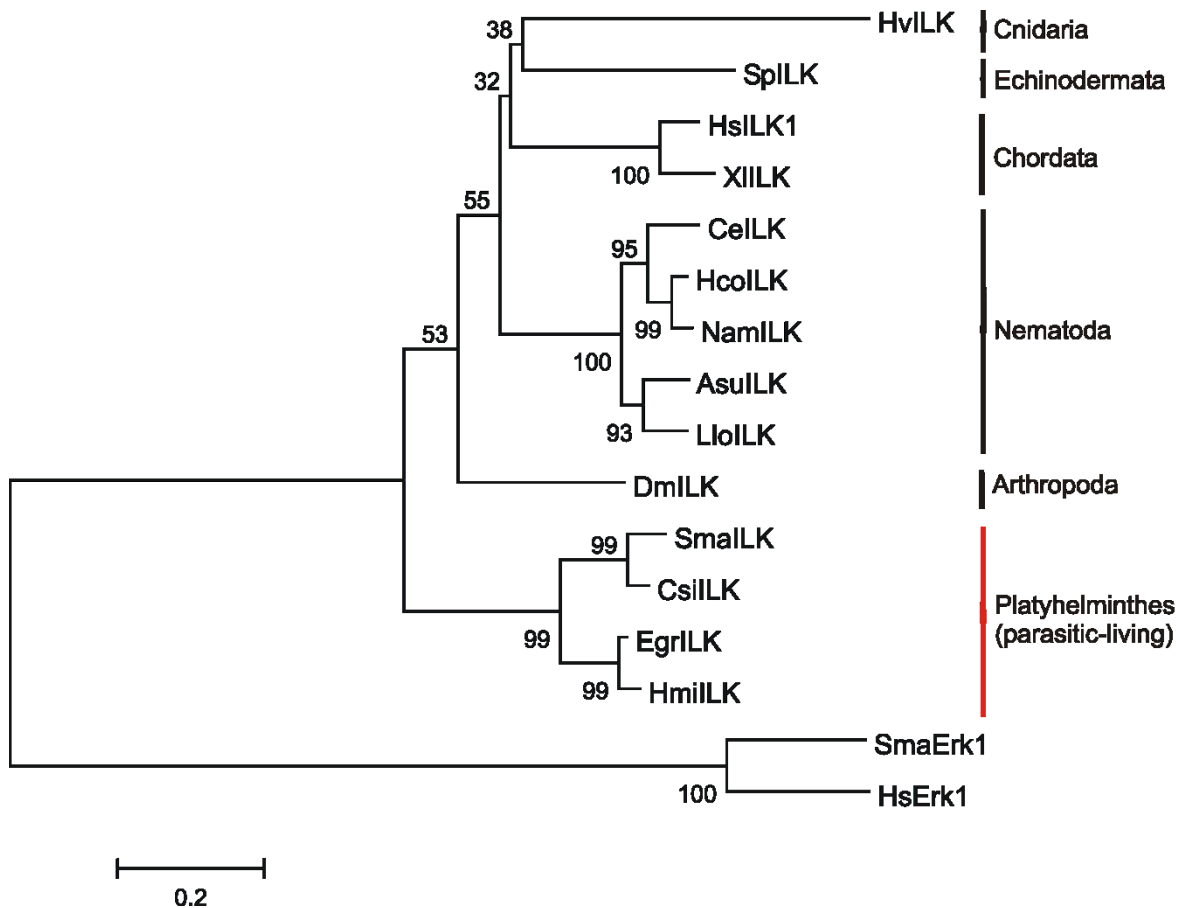
1 **Supplementary figure S1: Structure and phylogenetic analysis of SmILK**

2 **A**



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4 **B**



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8 **Suppl. fig. S1**

9 **A**, Structure of SmILK (Smp\_079760) analysed by SMART showing three ankyrin domains  
10 (ANK) and the pseudokinase-like domain (Pkinase).

11 **B**, Phylogenetic analysis using the Neighbor-Joining method [1-4]. In addition to SmILK  
12 (SmILK) the analysis included the following 15 amino acid sequences of orthologs of  
13 organisms of different phylogenetic origins such as *Hydra vulgaris* (HvILK; Genbank accession  
14 number: XP\_002158769), *Strongylocentrotus purpuratus* (SpILK; XP\_786444), *Homo sapiens*  
15 (HsILK1; NP\_004508), *Xenopus laevis* (XIILK; NP\_001086805), *Caenorhabditis elegans* (CeILK;  
16 NP\_497139), *Haemonchus contortus* (HcoILK; CDJ97346), *Necator americanus* (NamILK;

17 ETN76257), *Ascaris suum* (AsuILK; ERG84143), *Loa loa* (LloILK; XP\_003136221), *Drosophila*  
18 *melanogaster* (DmILK; CAB77053), *Clonorchis sinensis* (CsiILK; GAA48258), *Echinococcus*  
19 *granulosus* (EgrILK; CDJ17537), *Hymenolepis microstoma* (HmiILK; CDS28855) and two amino  
20 acid sequences of the related serine/threonine kinases Erk of *Schistosoma mansoni*  
21 (SmaErk1;CCD60922 ) and *Homo sapiens* (HsErk1; NP\_002737) serving as out-group. All  
22 positions containing gaps and missing data were eliminated. In Planaria, the free-living class  
23 of the phylum platyhelminthes, no homolog was found by BLAST. Parasitic living species  
24 names were abbreviated with the first two letters, free-living with the first.

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## 26 **References**

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