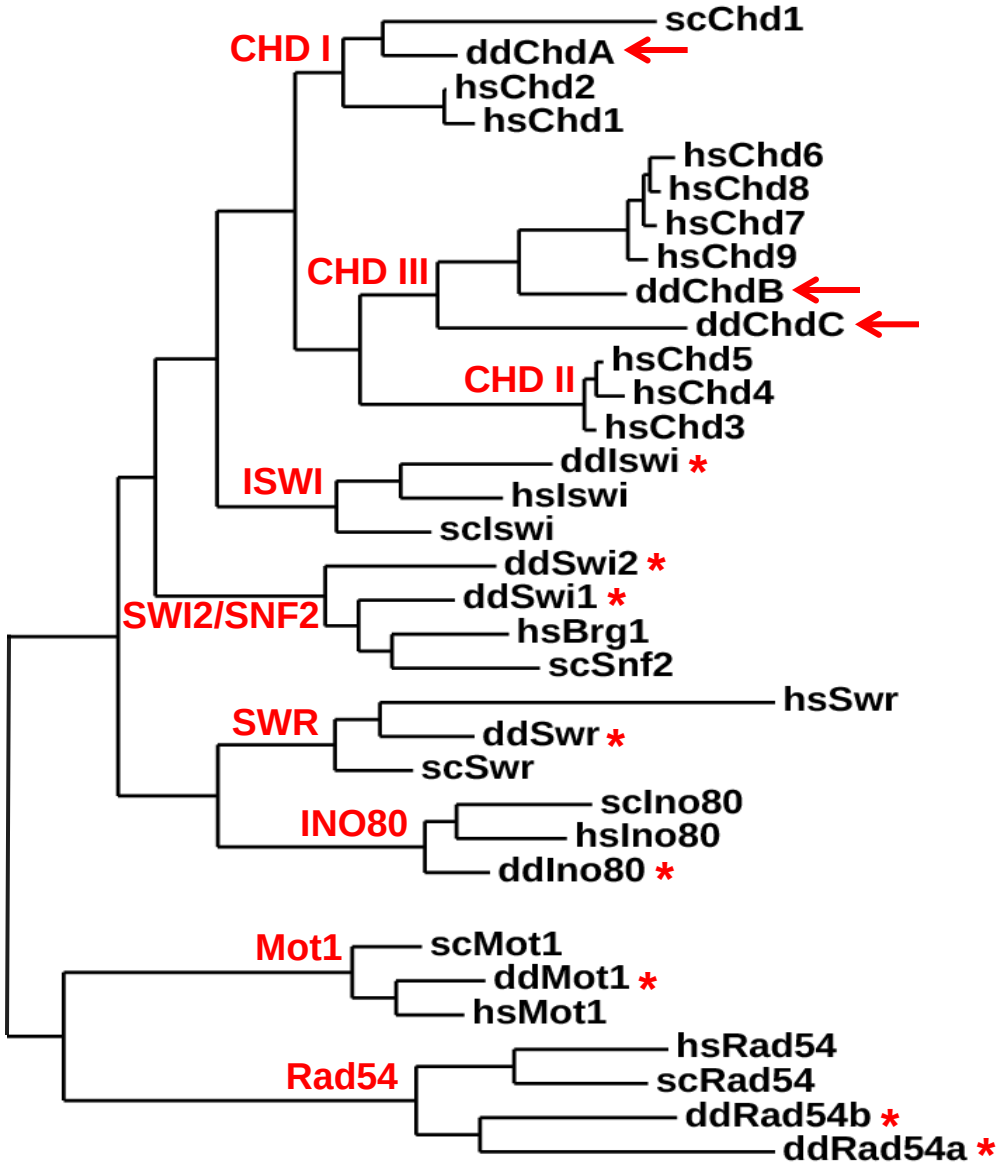
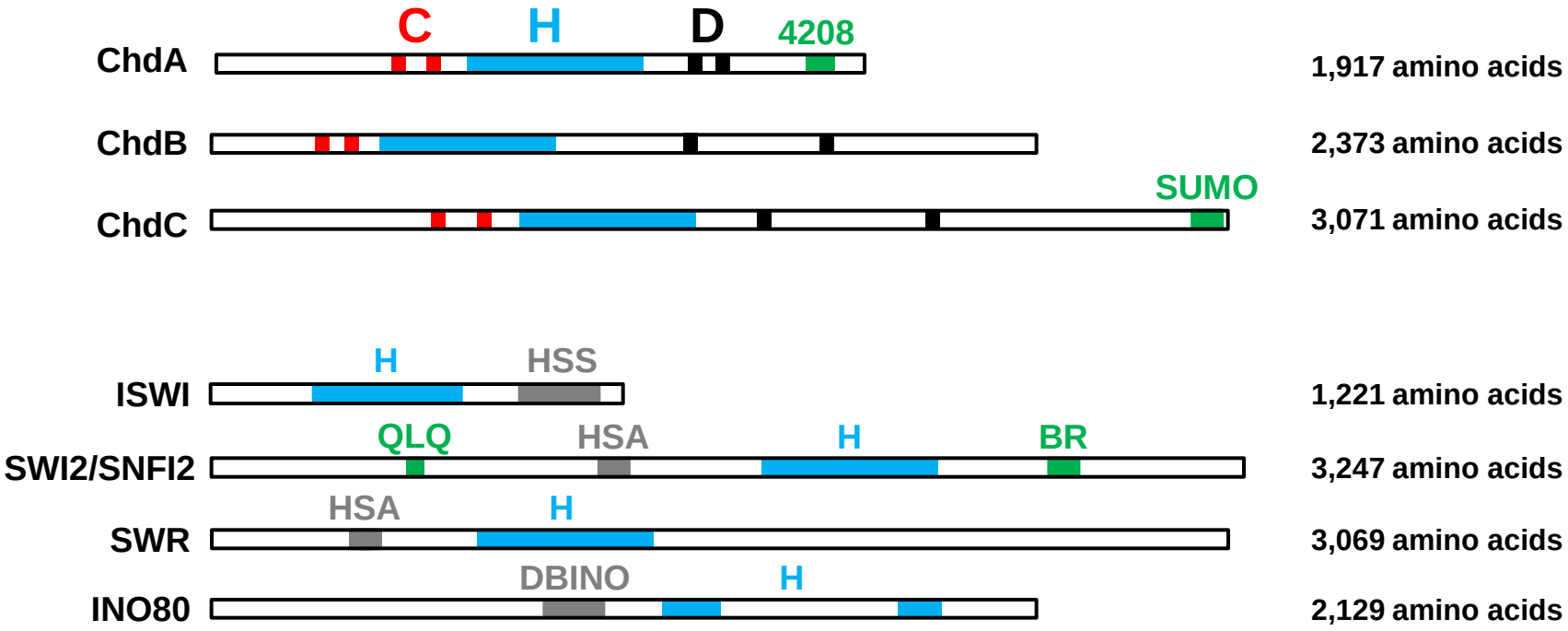
**Fig. S1. Phylogenic tree comparing the *D. discoideum*, *H. sapiens*, and *S. cerevisae* SNF2-type proteins.** *Dictyostelium* encodes members of each of the major SNF2-type family class members, indicated as CHD I, CHD II, CHD III, ISWI, Snf2 (i.e. SWI2/SNF2), SWR, INO80, Mot1, and Rad54. ChdA clusters with CHD subfamily I; ChdB and ChdC cluster with each other and with CHD subfamily III. dd is *D. discoideum,* hs is *H. sapiens*, and sc is *S. cerevisae.*

**Fig. S2. Schematic representations of the relative organization of the major SNF2-type family class proteins in *Dictyostelium*.** The chromodomain (C), ATPase/Helicase (H), and DNA-binding (D) motifs in ChdA, ChdB, and ChdC are indicated. 4208 is a domain of unknown function (DUF) that appears unique to CHD I-type family members; ChdC has a C-terminal SUMO-like sequence. HSS (hand-sant-slide), HSA (helicase-SANT-associated) and DBINO (DNA-binding domain of INO80) are DNA-binding elements in other SWI2/SNF2-type family members. The QLQ and BR (bromo) domains are characteristic of SWI/SNF2.

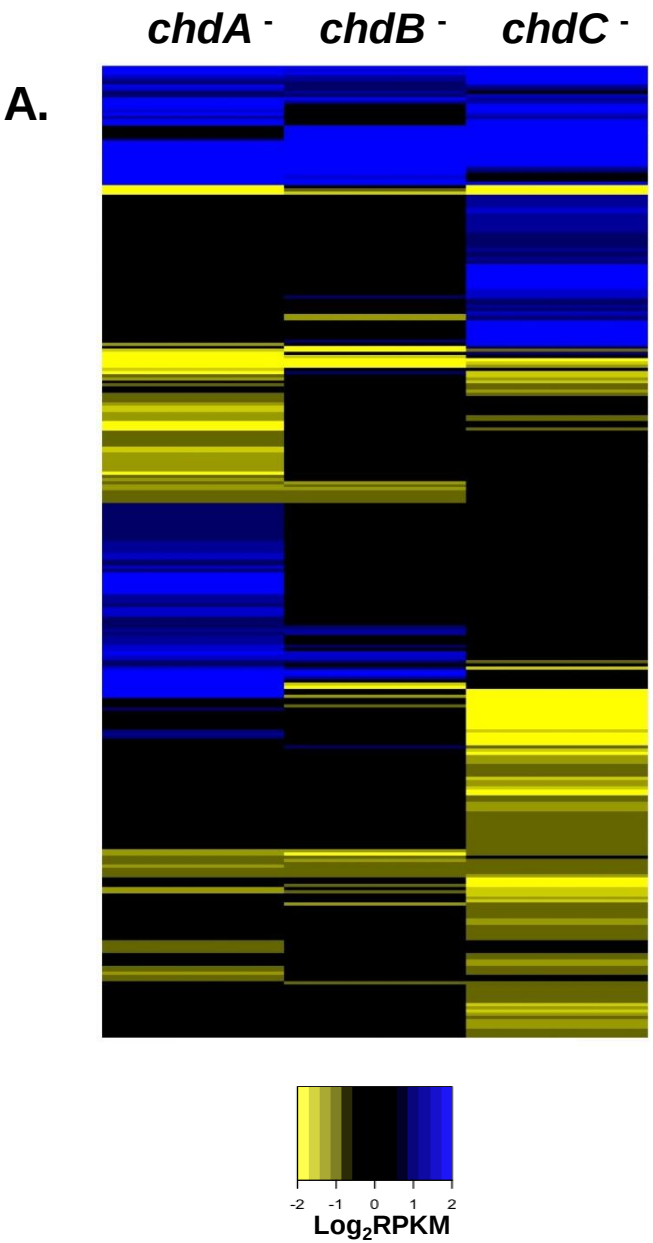
**Fig. S3. Expression changes in GO clustered genes for growth or development.** A. Heat maps show $\log_2$-fold change in RPKM values in the *chdA*-, *chdB*-, and *chdC*-nulls relative to WT during growth for 309 genes with GO annotations associated with metabolic functions., B. 94 *Dictyostelium* genes (left) are defined as defective in cAMP wave formation and 51 genes (right) were selected for cytoskeletal control. Heat maps show $\log_2$-fold change in RPKM values for the gene expression for each loci in the *chdA*-, *chdB*-, and *chdC*-nulls relative to WT, during differentiation in the presence of cAMP pulses for 5 hour., C. 13 genes had been previously identified as dependent upon cAMP pulses for induction during development dependent (Iranfar et al., 2003). Heat maps show $\log_2$-fold change in RPKM values for these pulse-induced genes in the *chdA*-, *chdB*-, and *chdC*-nulls relative to WT, during differentiation in the presence of cAMP pulses for 5 hour.




**Supplemental Figure S1**

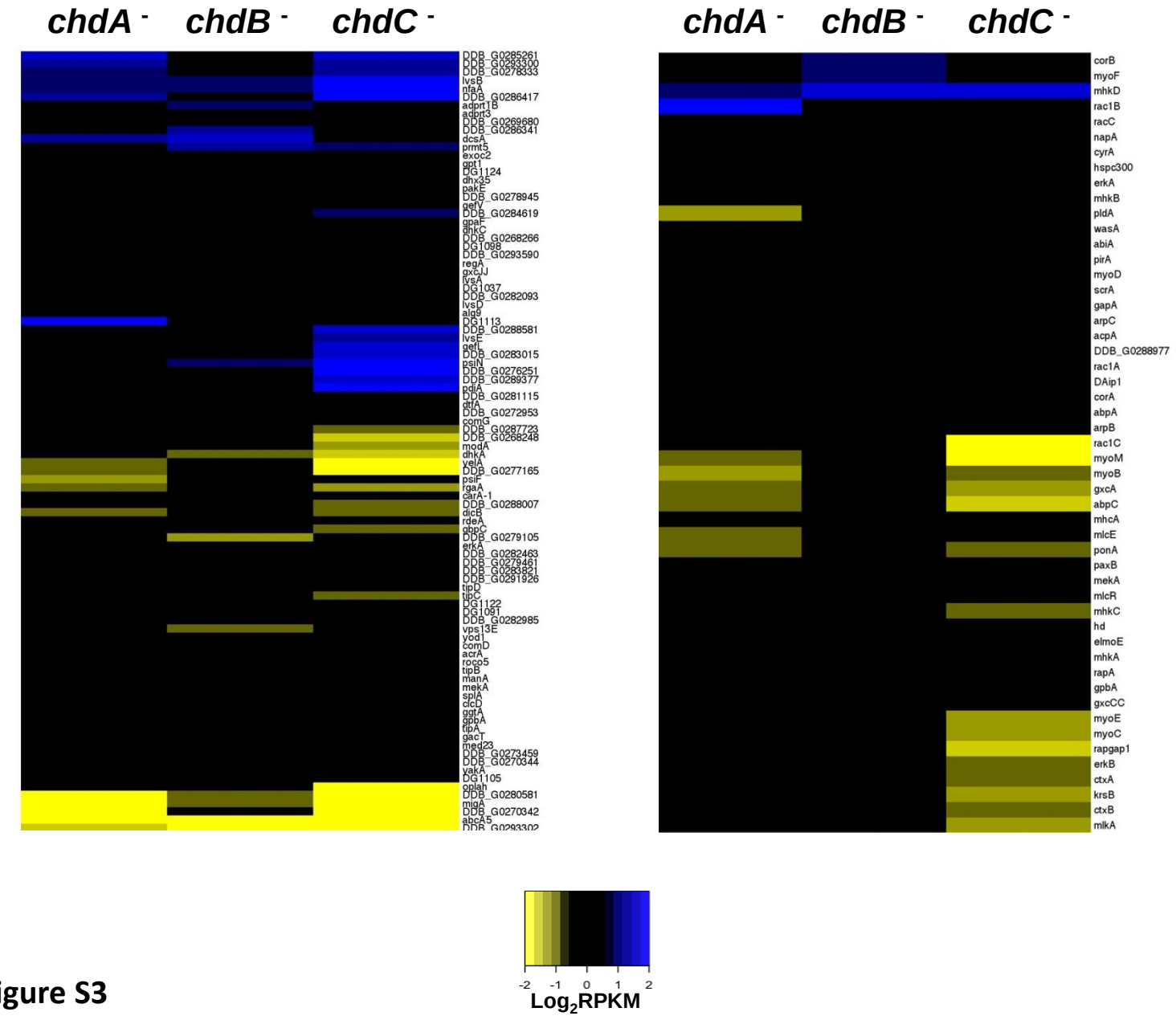



**Supplemental Figure S2**



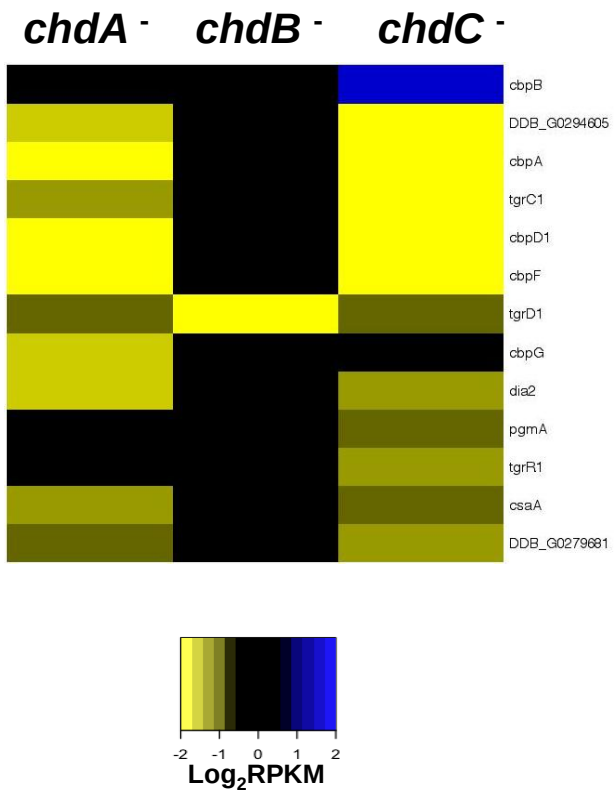

**Supplemental Figure S3**

**B.**




**Supplemental Figure S3**

C.




**Supplemental Figure S3**