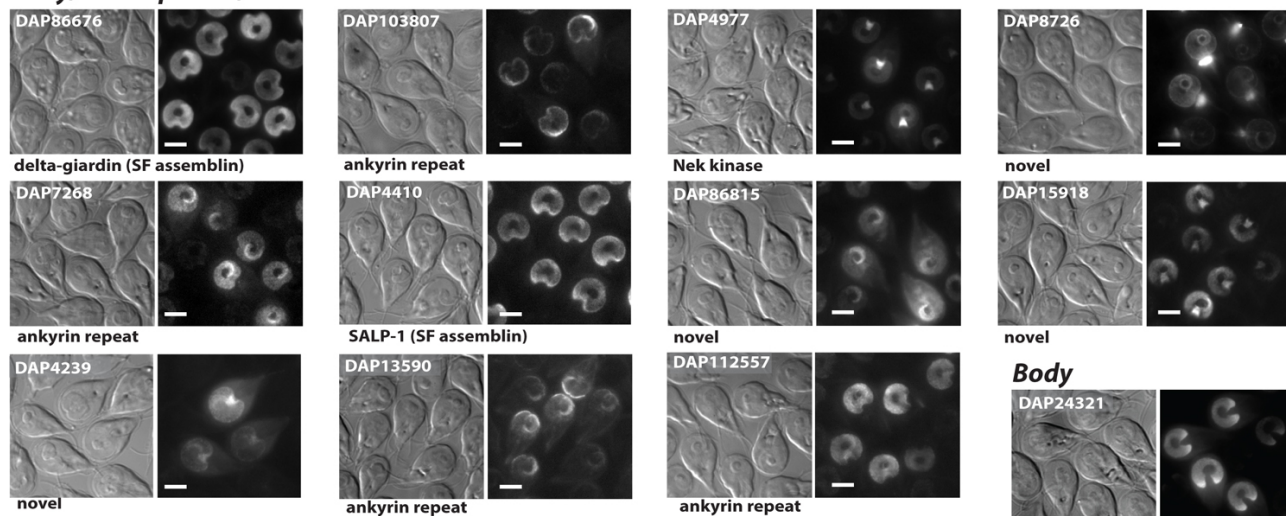


Figure S1.

Biochemical fractionation readily extracts disc and axoneme proteins for shotgun proteomic analysis and mass spectrometry. Extraction of *Giardia* trophozoites with detergent and high salt (A) removed membrane and cytosol from the microtubule cytoskeleton (P1). Subsequent extractions with Tris-EDTA and HEPES further disrupted the disc resulting in the S2, P2, S3 and P3 fractions. Immunostaining of the P1 fraction (B, C) shows that the disc (green, anti- δ -giardin) and flagella (magenta, anti-alpha-tubulin) were retained. Negative staining of the P1 fraction (D) confirms the retention of the disc (body, vg, oz, lc), flagella (AF, PF) and the funis (fn); greater dissociation of the disc from the axonemes is evident in the S3 fraction as shown by δ -giardin immunostaining (E, F). SDS-PAGE resolves proteins that are enriched in total cell pellet (T) and each pellet (P1, P2, P3) and supernatant (S1, S2, S3) fraction. Following mass spectrometry of fractions (P1, P3, S2, S3), the Venn diagram comparison indicates some overlap between proteins in the various fractions (H).

Body/Overlap Zone/Ventral Groove



Body/Overlap Zone

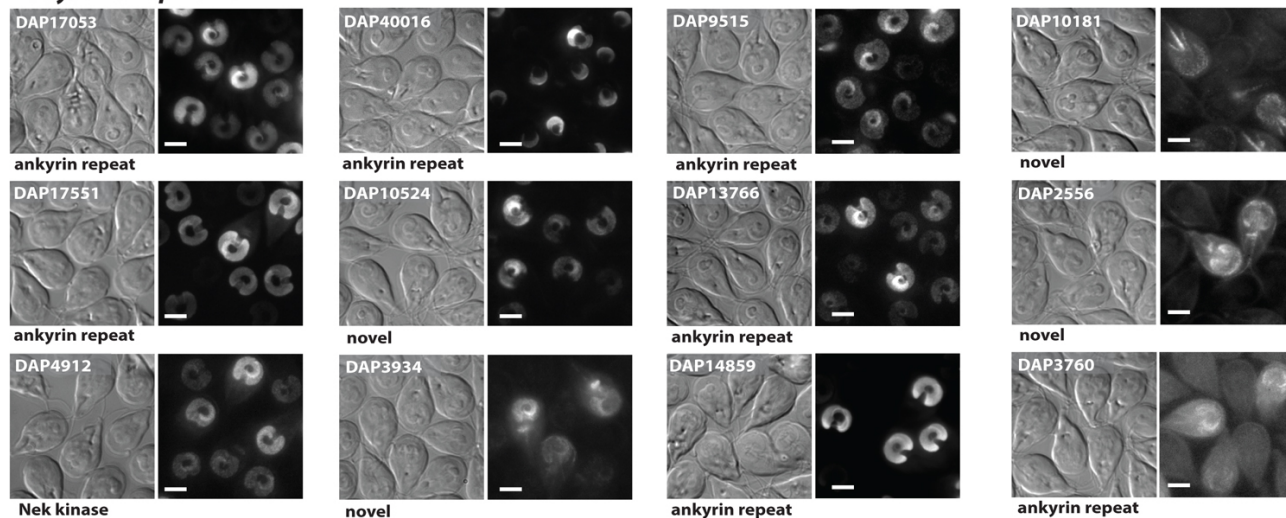


Figure S2.

Representative disc-specific localization of Body/Overlap Zone/Ventral Groove and Body/Overlap zone DAPs. Left image is DIC; Right is DAP-GFP localization using epifluorescence.

Disc Margin

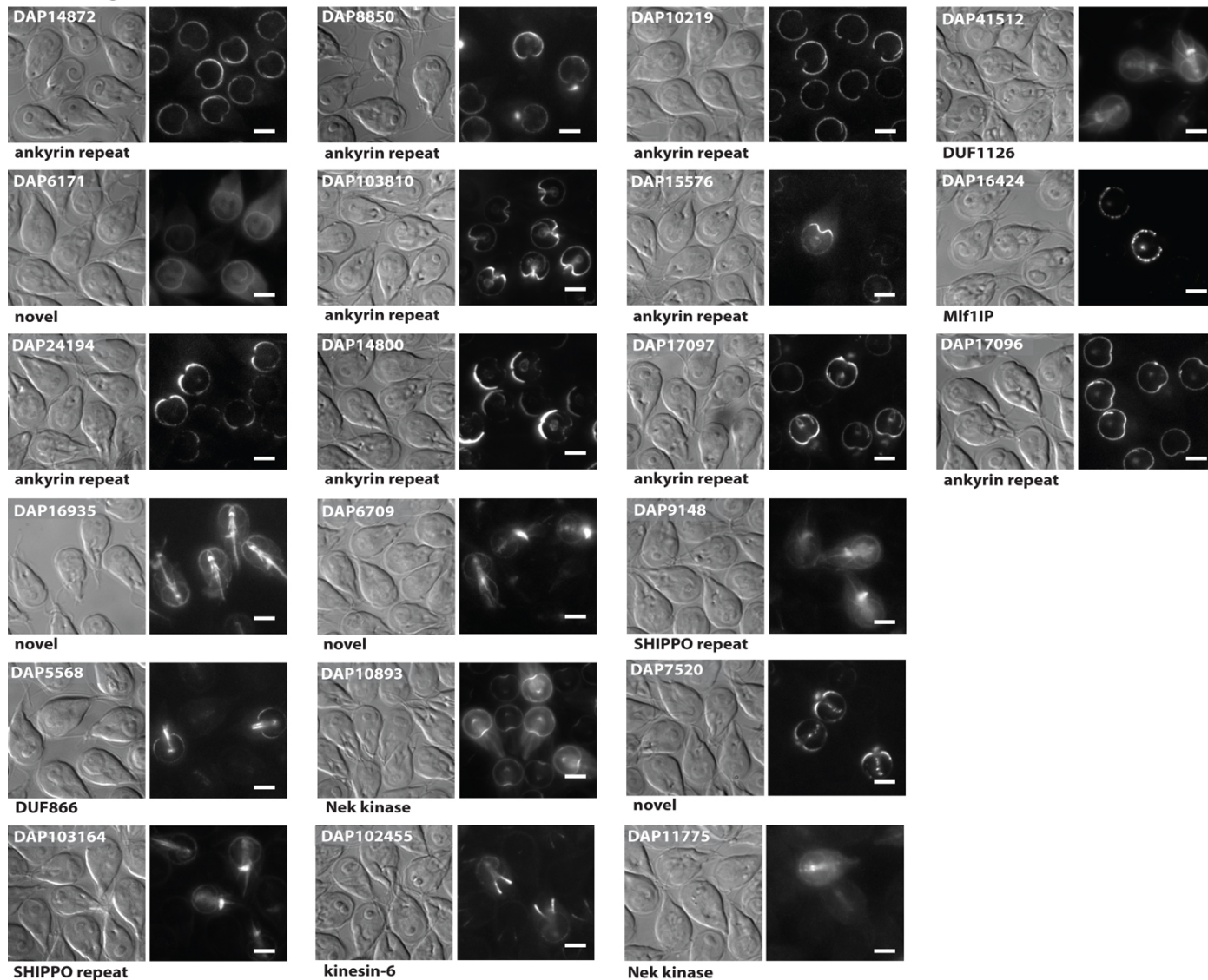


Figure S3.

Representative disc-specific localization of Disc Margin DAPs. Left image is DIC; Right is DAP-GFP localization using epifluorescence.

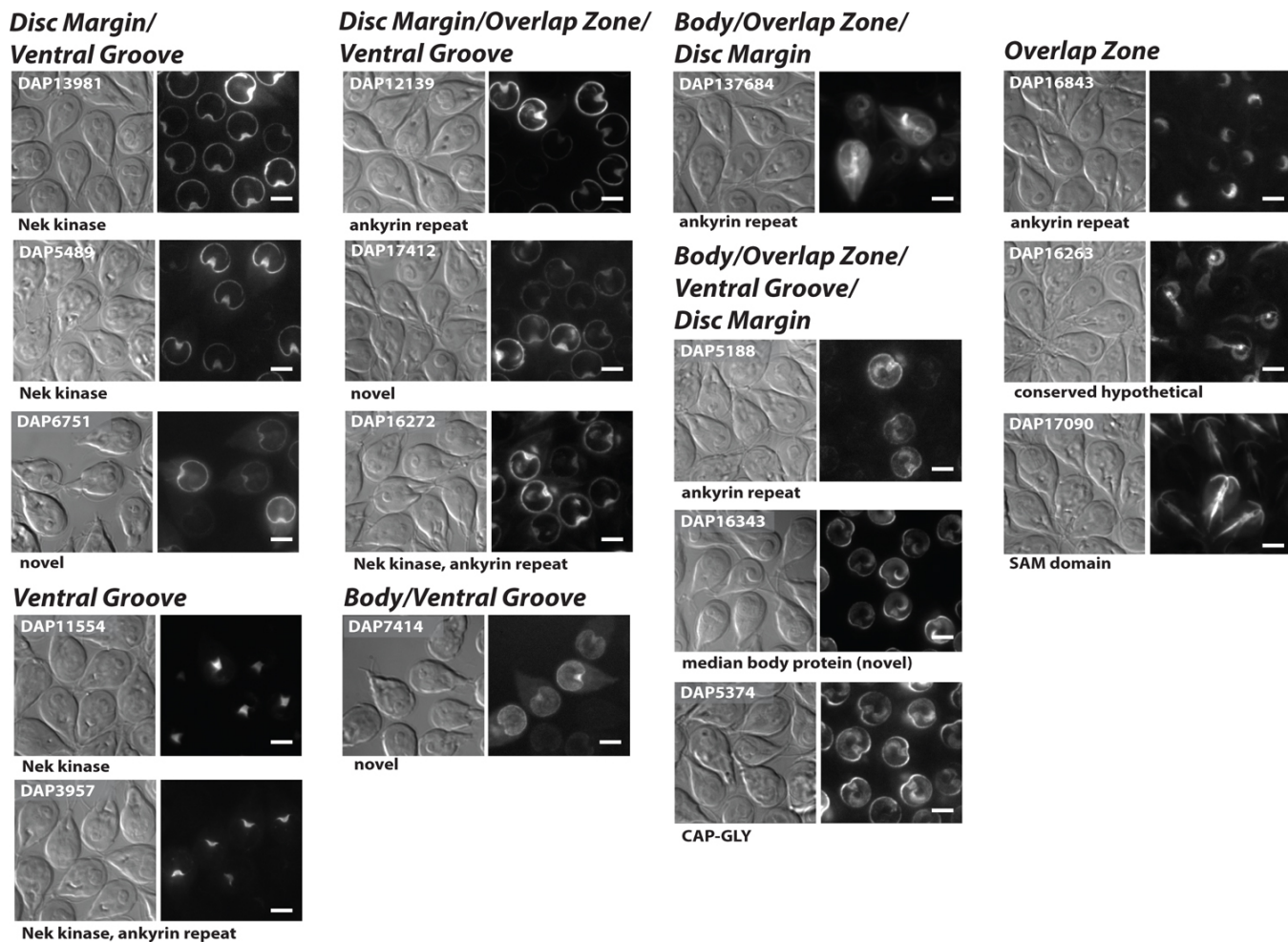
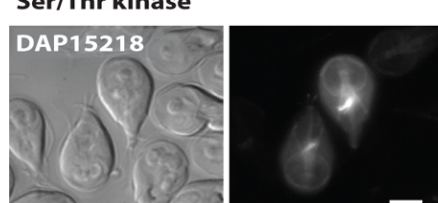
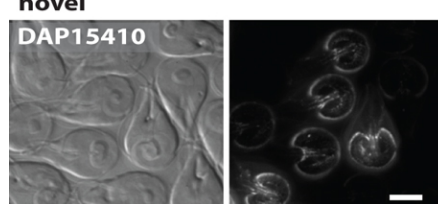
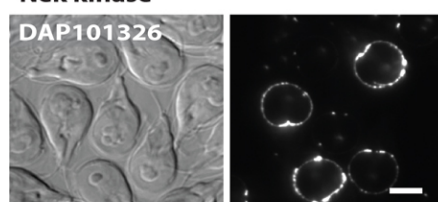
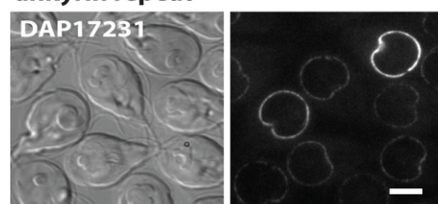
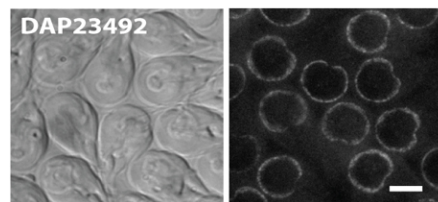


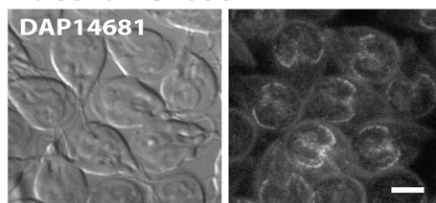
Figure S4.

Representative disc-specific localizations DAPs localizing to the more than one region of the Disc Margin, Ventral Groove, Overlap Zone, or disc body. Left image is DIC; Right is DAP-GFP localization using epifluorescence.

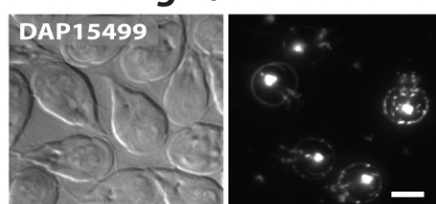
Lateral Crest



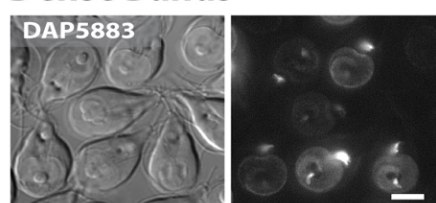
Body/Ventral Groove/ Lateral Crest



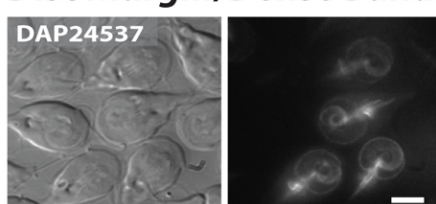
Disc Margin/Dense Bands



Body/Overlap Zone/ Dense Bands



Body/Overlap Zone/ Disc Margin/Dense Bands



Dense Bands

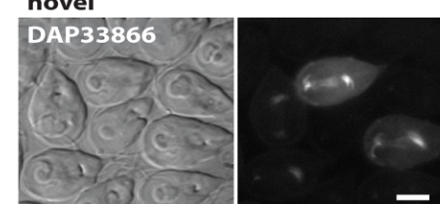
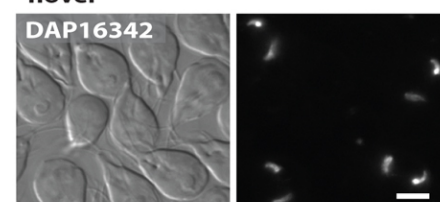
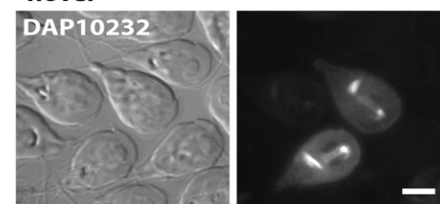
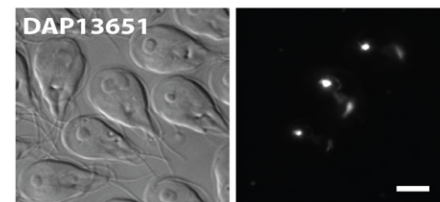


Figure S5.

Representative disc-specific localizations DAPs localizing to the lateral crest, dense bands, as well as to the Disc Margin, Ventral Groove, Overlap Zone, or disc body regions. Left image is DIC; Right is DAP-GFP localization using epifluorescence.

Table S1.

Summary of Mass Spectrometry Results of Disc Fractions.

DAPs associated with several replicates of disc fractionations described in Supplemental Figure 1 and Methods. Two replicates of the P1, S2, and S3 fractions and one P3 fraction are presented if more than 4 peptides for a particular ORF were identified.

[Click here to Download Table S1](#)

Table S2. Summary of the 87 disc-specific localizations of DAPs to particular sub-regions of the disc. The localization of DAPs to regions of the disc are presented as well as associated proteomic and/or localization evidence in support of disc-specificity in this study as well as in prior studies.

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