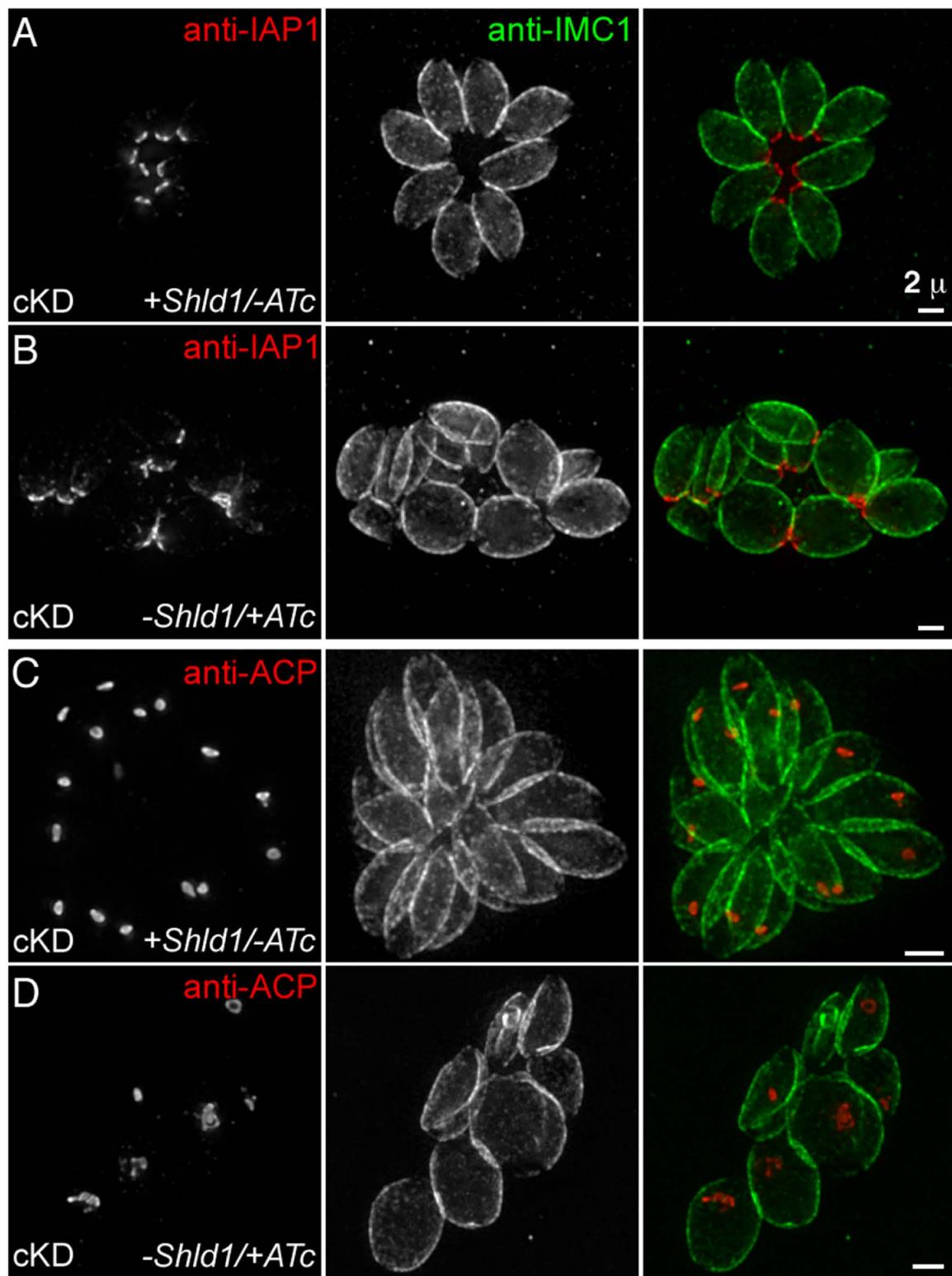


**Figure S1.** CEN2 depletion does not affect the distribution of ISP1, rhoptries, or dense granules. (A) Images of cKD parasites treated for 120 h with ATc (-Shld1/+ATc), labeled with antibodies for ISP1 (red), a marker for the apical cap, and IMC1 (green), a marker for the cortex of mature and daughter parasites. Scale bar = 2  $\mu$ m.

(B-D) Images of RH $\Delta$ hx parasites (WT, B), and cKD parasites cultured with Shld1 (+Shld1/-ATc, C), or treated for 48 h with ATc (-Shld1/+ATc, D), labeled with antibodies for the rhoptries. Red: anti-RON2-4, a marker for the rhoptry neck. Green: anti-ROP2,3,4, markers for the rhoptry bulb. Scale bars = 2  $\mu$ m.

(E-G) Images of RH $\Delta$ hx parasites (WT, E), and cKD parasites cultured with Shld1 (+Shld1/-ATc, F), or treated for 48 h with ATc (-Shld1/+ATc, G), labeled with antibodies for GRA8 (red), a marker for the dense granules, and IMC1 (green). Scale bars = 2  $\mu$ m.



**Figure S2.** CEN2 depletion does not have a major impact on construction of the basal complex or inheritance of the apicoplast.

Representative images of cKD parasites cultured with Shld1 (+Shld1/-ATc, A&C) or treated with ATc (-Shld1/+ATc) for 84 h (B) or 87 h (D). The parasites were labeled with antibodies for IMC1 (green), and IAP1 (A&B, red), a marker for the basal complex, or acyl carrier protein (ACP, C&D, red), a marker for the apicoplast. Scale bars = 2 μm.

**Table S1.** Primers used in this study.

Name	Sequence (5' to 3')
S1	ACTGGCTAGCCAAGGCTGTCGATTCAACAGAGAGC
S2	AGTCGCAGGCCCTCGCACTTTGCAGGGCATCTG
S3	CGATGGATCCCAGCGAGGAGCACTGCGAGGGCGAG
S4	CTAAAGGAACAAAGCTGGGTACCGGTACCGGGCCCCCTCG
S5	CTCCGGCTTGCAACCAAGGACCCGTAATACGACTCACTATAGGGC
S6	ATCGAGGACCCCTGATGAACCTGGCTTATTCAT
S7	GCGCAGATCTGCCAATTACTGACCGTACACC
S8	CAGCGAGGAGCACTGCGAGG
S9	GATCGCTTCTCGGTTCCCTACCCCTG
AS1	ACTGGGGCCCCCTGTGCCAAAATGTACCGGAGGC
AS2	ACTGGAATTGCTCGACAAAAAAAGGCCAAATGTA
AS3	ACGTCTTAAGTCACGGAAAGTCTTCTGGTCATGATCG
AS4	CTGCAGGAATTGATATCAAGCTTAACCGGTTGACTAAAACAAC
AS5	CGCCCTTGCTCACCATTTGCTAGCTTGTGAAAAAGGAAATTG
AS6	ATCGGCTAGCGGATCTAAAGGGAAT
AS7	GCGCCTTAAGCTAGGTGGCGACCGGTCCATGCCAT
AS8	CAGCTTCGCGGTAAATGGCGT
AS9	CCTGTTACGAACGCAAAGATGTGT