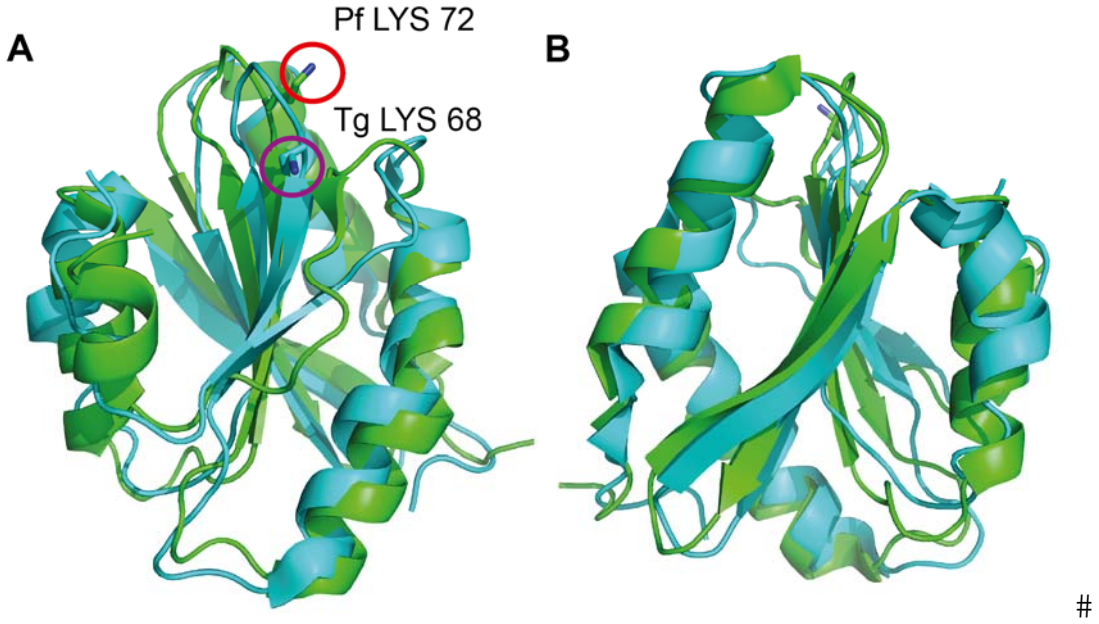
Supplemental Materials

Molecular Biology of the Cell

Haase et al.

Figure S1 Haase *et al*



#

Figure S1. Superimposition of PfADF1 (in green, (Wong *et al.*, 2011)) and TgADF (in turquoise, (Yadav *et al.*, 2011)) displays high structural similarity. The $Lys^{68/72}$ residues are depicted in blue and circled in red or purple for $PfADF1_{K72}$ and $TgADF_{K68}$ respectively.

Figure S2 Haase *et al*

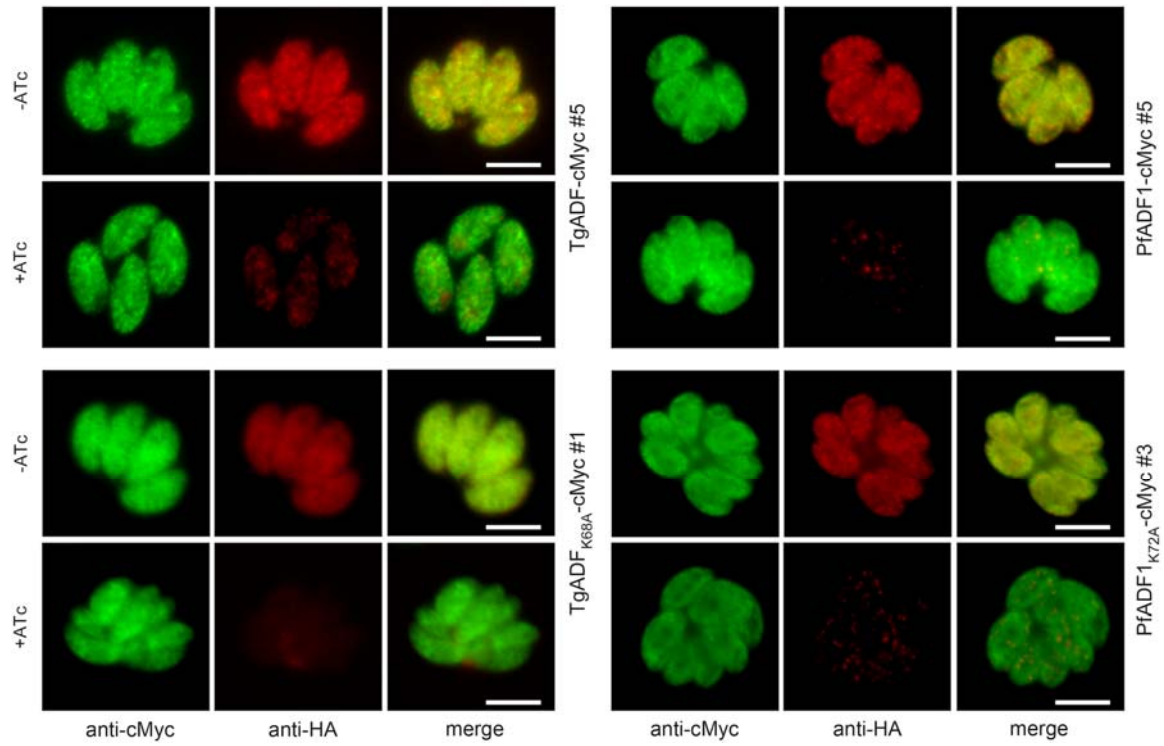


Figure S2. Immunofluorescence analysis of the additional clones (not shown in Figure 1) grown in the absence and presence of ATc. TgADF-HA and the complementing cMyc-tagged proteins are evenly distributed throughout the cytosol.

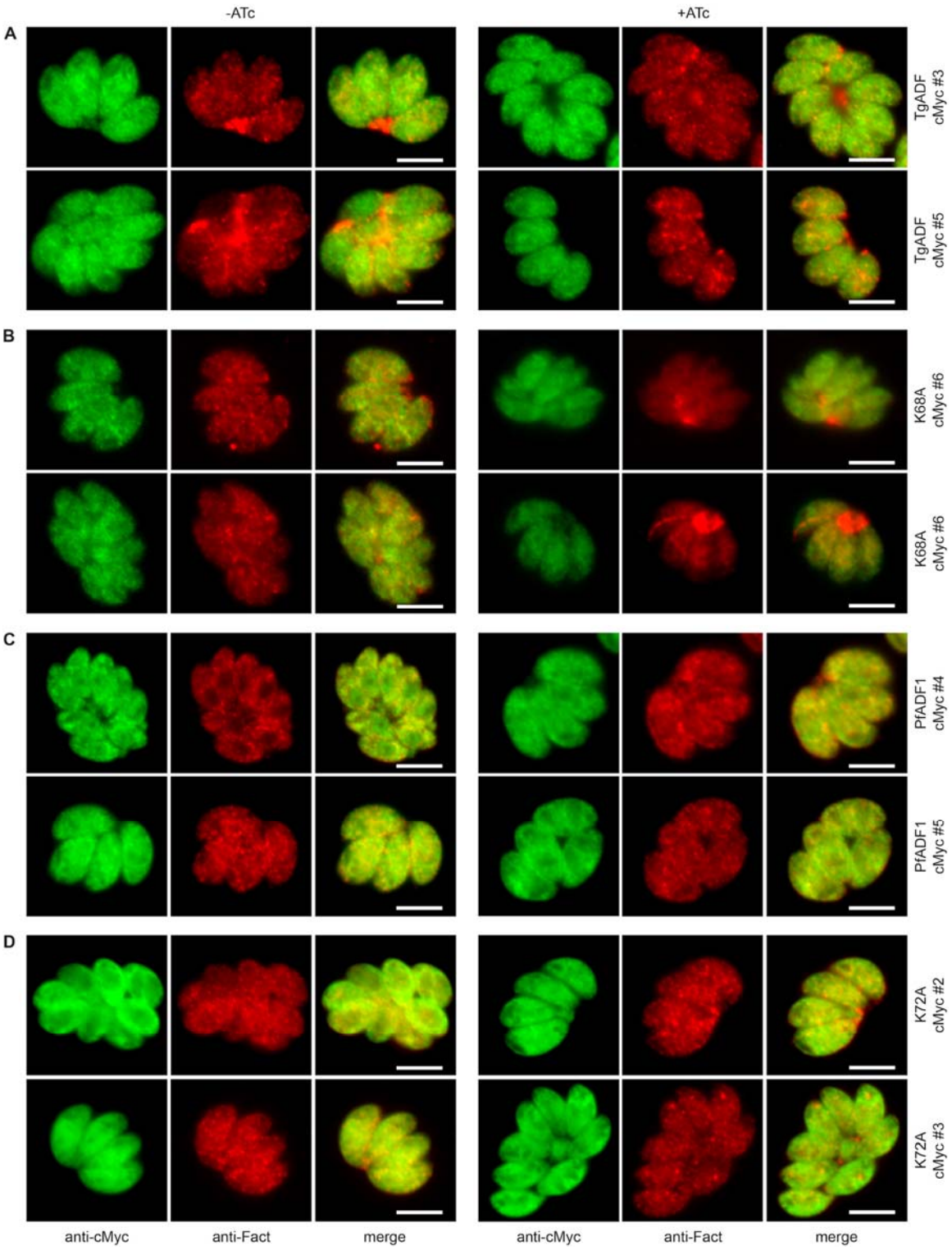


Figure S3. Actin is normally distributed in intracellular parasites.

Figure S4 Haase *et al*

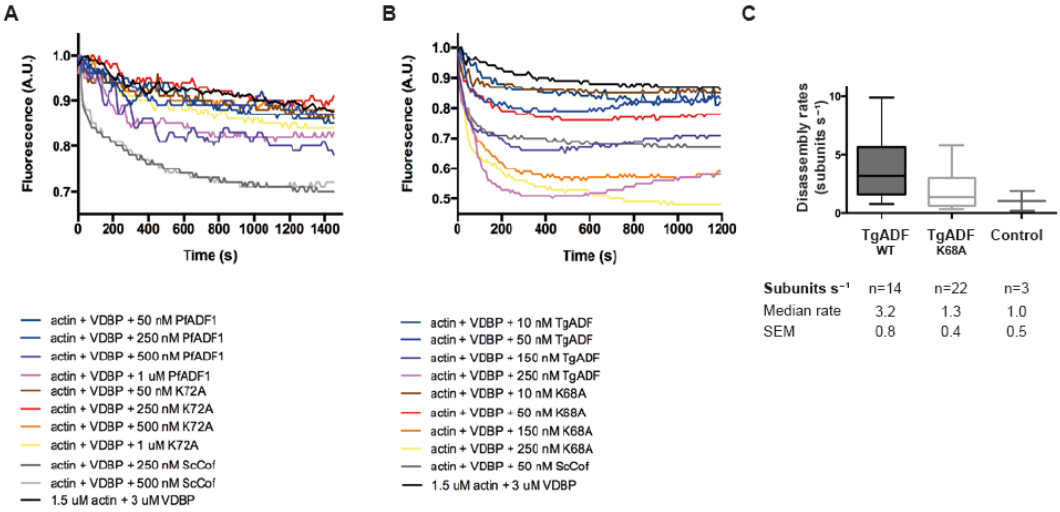


Figure S4.(**A-B**) F-actin disassembly assays using pyrene-labeled actin, induced by vitamin D-binding protein (VDBP). A range of wild type and mutant ADF protein concentrations, as well as ScCof (dark grey),were tested on preassembled 1.5 µM F-actin (10% pyrene-actin). Fluorescence intensities of each experiment were normalized as such that maximum fluorescence is 1.0. Actinonly is shown in black.**C**) Disassembly rates (given as subunits/s) as measured by TIRF microscopy from the barbed and pointed end of 5 filaments per protein at 100 nM (control 3) with n = number of total ends measured over time. Median rates and SEM are shown below.Error bars on graph indicate min/max values.

Table S1 Quantification of plaques from two independent experiments

Set 1[a]	**TgADF cKO**	**TgADF #3**	**TgADF #5**	**TgADF$_{K68A}$ #1**	**TgADF$_{K68A}$ #6**
-ATc	46	41	56	48	51
+ATc	0	40	55	0	0
Set 2[a]	**TgADF cKO**	**TgADF #3**	**TgADF #5**	**TgADF$_{K68A}$ #1**	**TgADF$_{K68A}$ #6**
-ATc	42	37	60	54	45
+ATc	0	32	63	0	0

Set 1[a]	**WT[b]**	**PfADF1 #4**	**PfADF1 #5**	**PfADF1$_{K72A}$ # 2**	**PfADF1$_{K72A}$ # 3**
-ATc	30	48	53	55	48
+ATc	32	56	52	52	51
Set 2[a]	**WT[b]**	**PfADF1 #4**	**PfADF1 #5**	**PfADF1$_{K72A}$ # 2**	**PfADF1$_{K72A}$ # 3**
-ATc	66	65	67	64	25
+ATc	87	78	72	61	23

[a]Mean from duplicates per line, clone and condition (±ATc).
[b]UntransfectedΔKU80 parasites were used a wild type reference line.