



Figure 8 supplement 1. Premature and constitutive delivery of Astrin:PP1 disrupts anaphase onset and segregation accuracy

(A) Astrin siRNA treated cells expressing either Astrin-GFP alone or Astrin GFP along with mCherry-GBP-PP1_v were exposed to STLC and Aurora-B inhibitor to generate monopolar spindles with stable Astrin:PP1 at kinetochores. After drug wash-off, monopolar to bipolar conversion and chromosome segregation were monitored using live-cell microscopy of Astrin-GFP (spindle) and SiR-DNA dye (chromosomes). (B) Time-lapse images of a cell co-expressing Astrin-GFP and mCherry-GBP-PP1_v undergoing monopolar to bipolar conversion of spindles. Yellow arrows mark lagging chromosomes. Cells assessed from the same experiment shown in Figure 8A. (C) Bar graph showing the percentage of lagging chromosomes as shown in B that were counted in time-lapse movies of cells treated as in A. (D) Cumulative graph showing the percentage of cells that completed monopolar to bipolar conversion and initiated anaphase, assessed using time-lapse movies as shown in Figure 8A. (E) Representative images of spindles undergoing monopolar to bipolar spindle conversion (45 minutes after STLC wash) show Astrin-GFP and mCherry-GBP-PP1_v signals at the kinetochore of cells coexpressing Astrin-GFP and mCherry-GBP-PP1_v but not Astrin-GFP alone. Scale as indicated.