



**Fig. S8:** Sample ACFs of protein time series from Luc reporter constructs. Time series as in Fig. 1 (B,C,E,F) of main paper. The x-axis gives the delay  $s$  in hours. Each single sample ACF corresponds to the time profile observed for a single cell. Top left: Sample ACFs of time series displayed in Fig. 1B of main paper (DP1, results for 15 cells, 25 hourly observations). Top right: Sample ACFs of time series displayed in Fig. 1C of main paper (BAC, results for 17 cells, 95 half-hourly observations). Bottom left: Sample ACFs of time series displayed in Fig. 1E of main paper (37 B, results for 24 cells, 185 half-hourly observations). Bottom right: Sample ACFs of time series displayed in Fig. 1F of main paper (37 A, results for 20 cells, 95 half-hourly observations). The two bottom experiments have many cells showing longer oscillations around 25-35 hours. In the experiment displayed in the bottom left graph one can see that 3 out of the 24 cells behave like a white noise process.