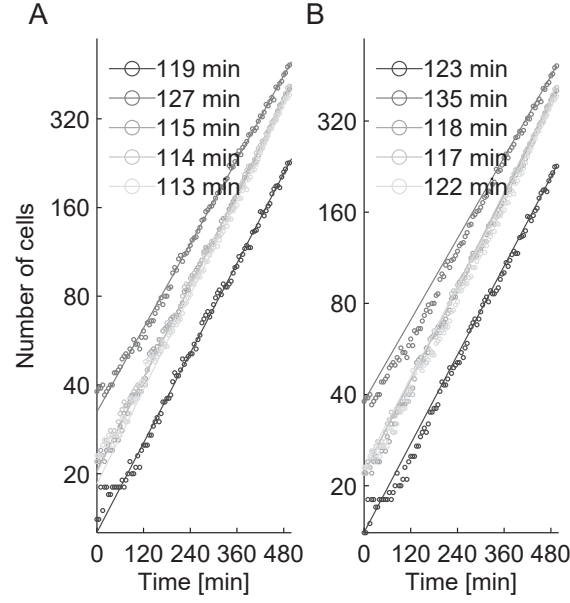


Figure S1: Growth rate of *S. cerevisiae* in microfluidic device



Reliable measurement of the growth rate in long-term time-lapse imaging can be obtained by counting the number of cells at the beginning and end of the observation period. *S. cerevisiae* cells were loaded in the microfluidic device and grown in Smin+glucose in the absence of light stress. Brightfield images were captured in a five minute interval. Cells were counted in each frame and plotted against the experiment time in a semi-logarithmic plot. A: An exponential function ( $a * x^b$ ) was fitted to all data points and the growth rate calculated from the fit parameter  $b$ . The fitted growth function is indicated by gray lines. The calculated doubling time was  $117 \pm 6$  min (mean  $\pm$  standard deviation). B: The growth rate was calculated based on the number of cells in the first and last frame only. The calculated growth rate is indicated by gray lines. The doubling time was  $123 \pm 7$  min (mean  $\pm$  standard deviation).