SDS PAGE of cell-free synthesized αHL-eGFP

Cell-free reaction of αHL-eGFP was done as explained in the manuscript. A control reaction was done with no plasmid. Protein expression was visualized on a SDS PAGE 13%. The fusion protein αHL-eGFP (62 kDa) appears at the good size on the gel (between 50 kDa and 75 kDa).

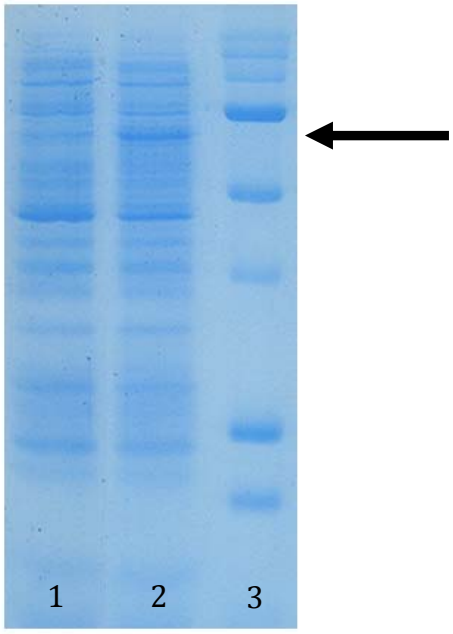

Fig. S1. SDS PAGE of cell-free reactions. Column 1: cell-free reaction with no plasmid. Column 2: cell-free reaction of αHL-eGFP according to figure 1A. Column 3: marker (from bottom to fifth band: 12, 25, 37, 50, 75 kDa).

SPB formation on quartz sensor

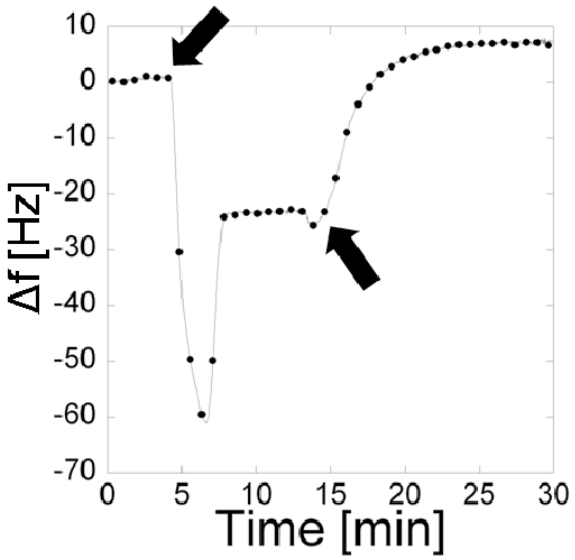

Fig. S2. QCM-D frequency shift signal measured during the formation of the POPC SPB on the quartz sensor. A solution of POPC liposomes at a temperature of 23°C was injected at a flow speed of 40 μl/min. After 5 minutes (marked by the first black Arrow), adsorption of liposomes was detected by a large frequency drop (from 0 Hz to -65 Hz) followed by a fast increase up to a frequency of -24 Hz. This increase corresponds to the release of entrapped water (from -65 Hz to -24 Hz). Some PBS 1X was injected for 10 minutes to remove weakly adsorbed material before increasing the temperature of the QCM-D chamber to 29°C (marked by the second black arrow after 15 minutes. The change in temperature caused a large positive frequency shift of 30 Hz up to a new stable value around +7 Hz. This increase is a pure electronic effect and not a change in the mass adsorbed on the sensor surface (signal returns to -23 Hz when the temperature is lowered back to 23°C, data not shown).

Adsorption/ insertion of αHL-eGFP into the SPB, a kinetics model

Equation 2 was solved as follow:

X(t) is defined as :

The software Kaleidagraph was used to find a numerical fit of C(t) for the first 2 h (excluding the lag phase of 30 min, Fig. S3). The fit was used to calculate $\int C(t)dt$ and to obtain the fit displayed in **Fig. 8.**

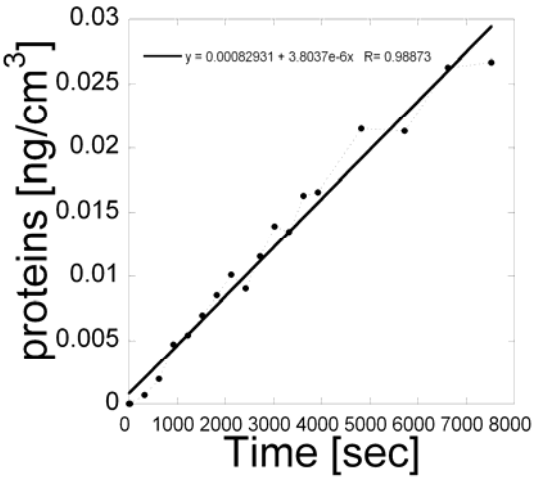

Fig. S3. Batch mode expression of αHL-eGFP and the numerical fit for C(t).