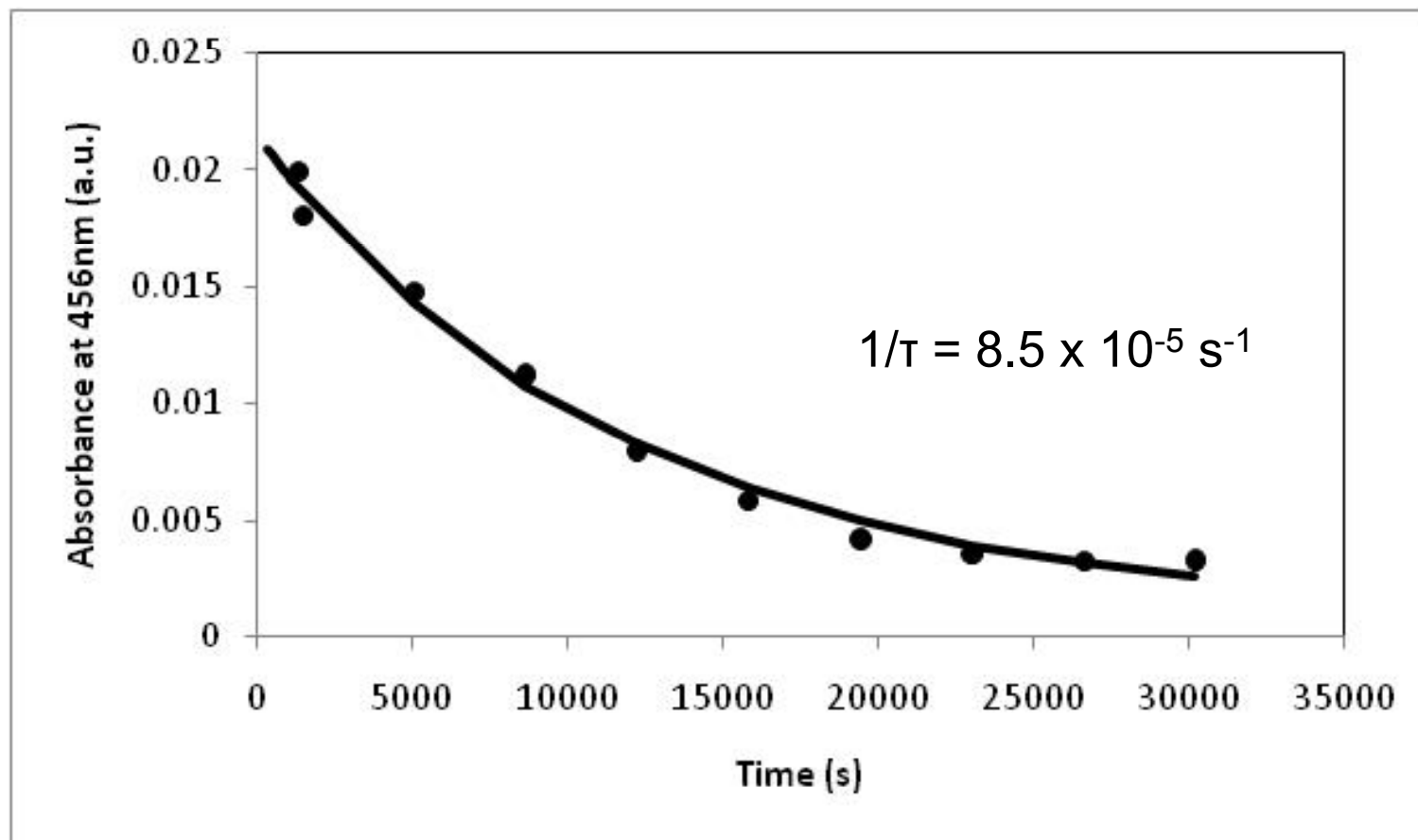


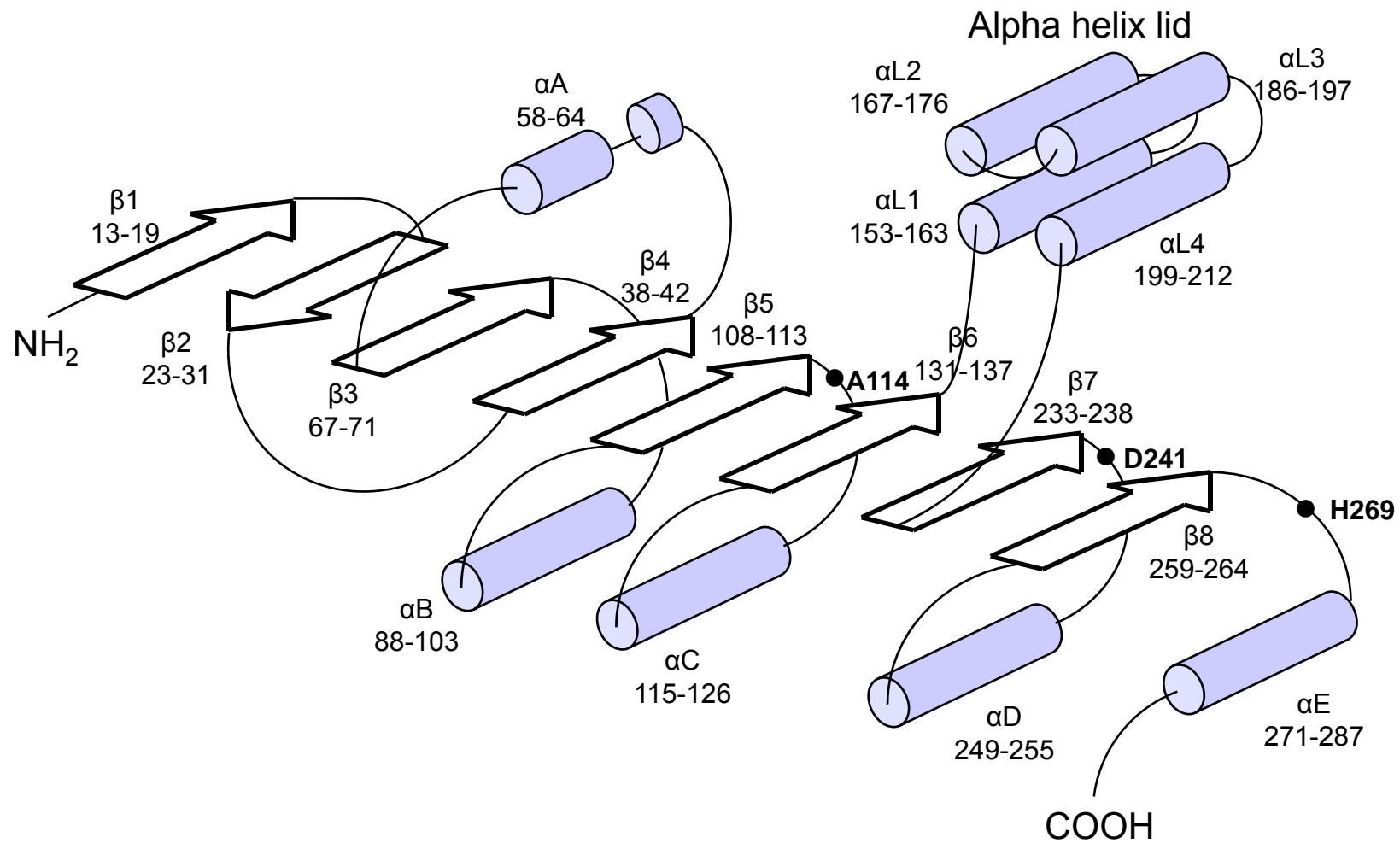
## Supplementary figure legends

Supplementary Figure 1. Decay of S114A:DSHA complex at 456 nm. The complex was formed by mixing 14  $\mu\text{M}$  S114A and 6  $\mu\text{M}$  DSHA in potassium phosphate buffer (I = 0.1 M, pH 7.5) at 25°C. The solid line represents a single-exponential fit to the data.

Supplementary Figure 2. The  $\alpha/\beta$  hydrolase fold of HsaD. The  $\alpha$ -helices and  $\beta$ -strands are represented by blue cylinders and white arrows, respectively. The location of the catalytic triad is indicated by black dots. The numbering refers to the amino acid residues of HsaD. The  $\beta 1$ -  $\beta 7$  and  $\alpha A$ - $\alpha F$  numbering is from the “canonical”  $\alpha/\beta$  hydrolase fold and the  $\alpha L 1$ -4 denote the  $\alpha$ -helices of the lid.



Supplementary Figure 1



Supplementary Figure 2