

## Supporting Information

### Accelerated nucleation of hydroxyapatite using an engineered hydrophobin fusion protein

Melanie Melcher<sup>1</sup>, Sandra J. Facey<sup>1</sup>, Thorsten M. Henkes<sup>1</sup>, Thomas Subkowski<sup>2</sup>, and Bernhard Hauer<sup>1\*</sup>

<sup>1</sup> Institute of Technical Biochemistry, University of Stuttgart, Allmandring 31, 70569 Stuttgart, Germany

<sup>2</sup> Fine Chemicals Research, BASF SE, 67056 Ludwigshafen, Germany

\* Corresponding author: Bernhard Hauer, Institute of Technical Biochemistry, University of Stuttgart, Allmandring 31, 70569 Stuttgart, Germany, Phone: 0049-711-685-63193; Fax: 0049-711-685-64569; E-mail: [bernhard.hauer@itb.uni-stuttgart.de](mailto:bernhard.hauer@itb.uni-stuttgart.de)

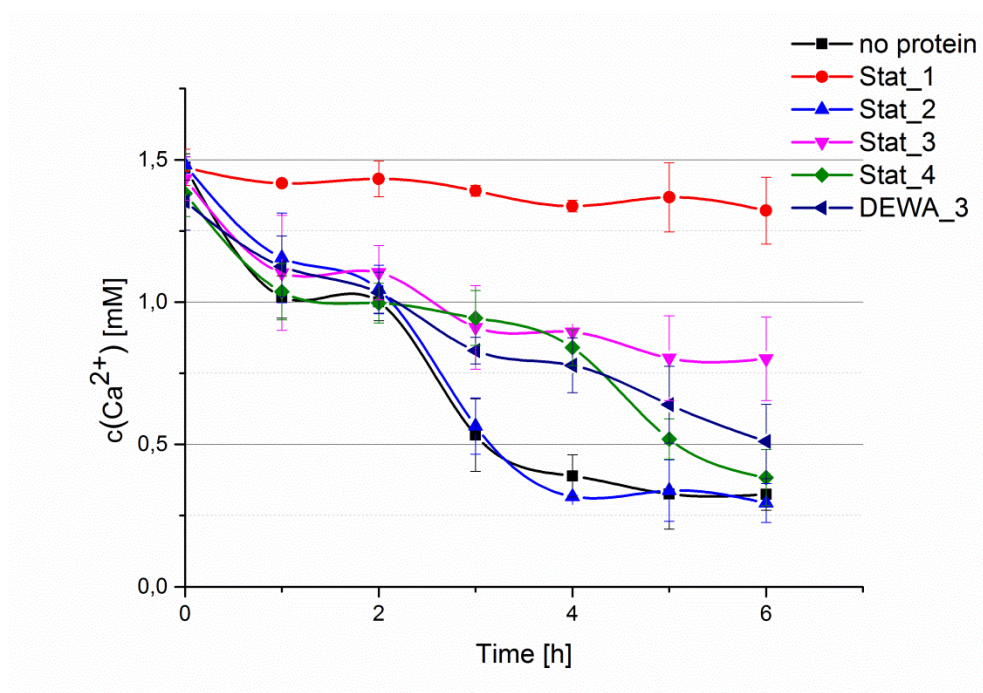
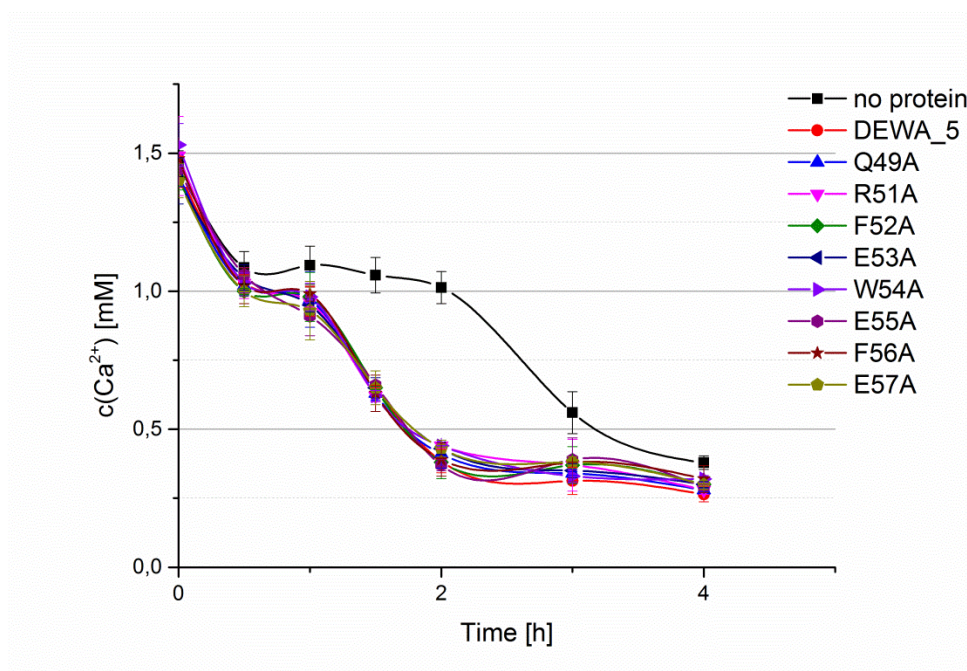
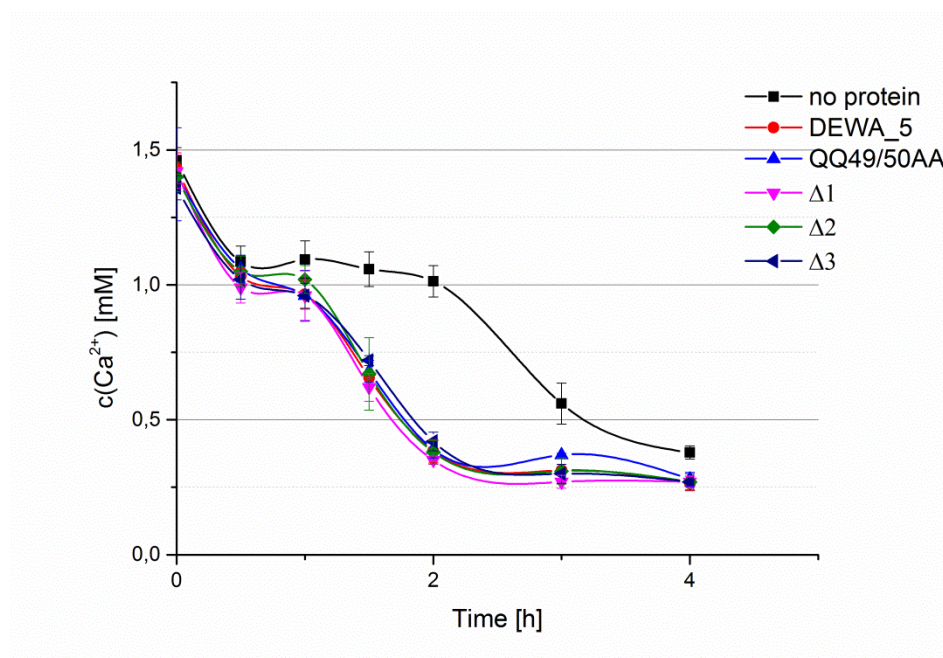


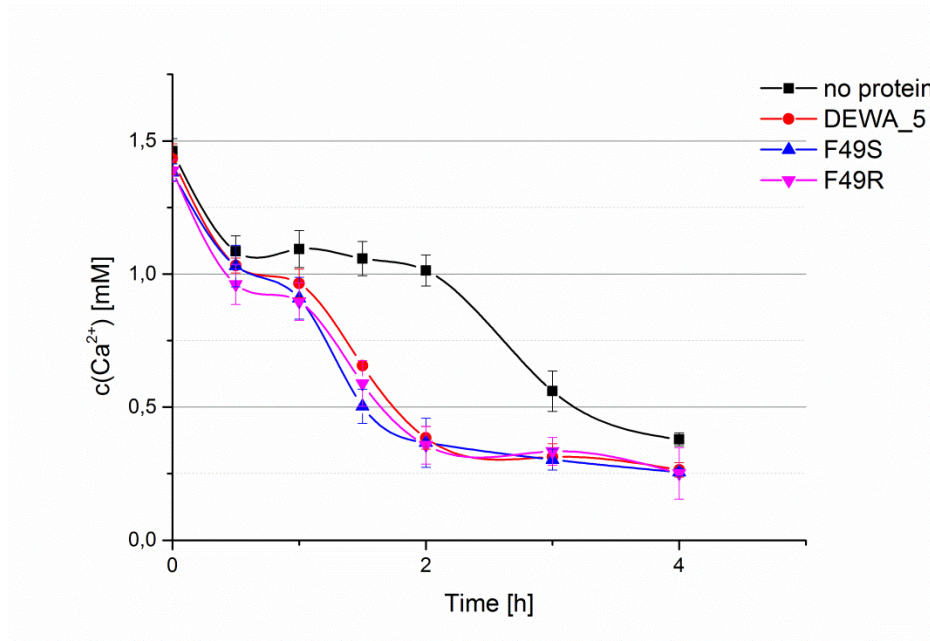
Figure S1: Nucleation in artificial saliva. Calcium consumption in the presence of DEWA\_3 and the statherin variants.



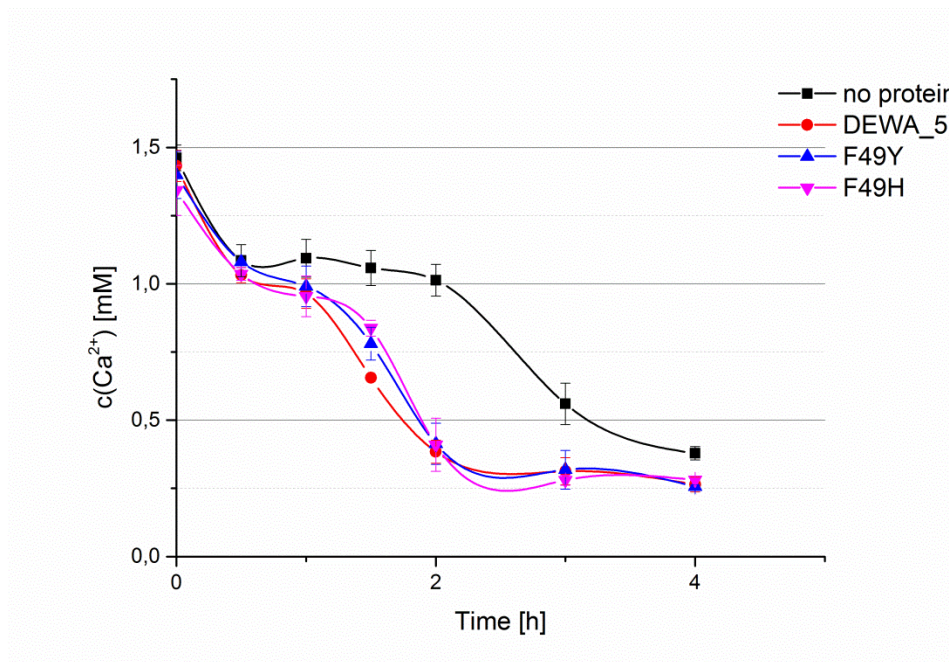
**Figure S2:** Nucleation of the alanine scan single variants in the sequence of P<sub>11-4</sub> within DEWA\_5. Calcium consumption in artificial saliva in presence of 25  $\mu$ M protein and the control without protein.



**Figure S3:** Nucleation in artificial saliva. Calcium consumption in the presence of DEWA\_5 and variants lacking glutamine residues in the sequence of P<sub>11-4</sub> within DEWA\_5 either by alanine substitution (QQ49/50AA) or by deletion ( $\Delta$ 1,  $\Delta$ 2 and  $\Delta$ 3).



**Figure S4:** Nucleation in artificial saliva. Calcium consumption in the presence of DEWA\_5 and variants F49S (40aaYaaD-SEWEFE-DEWA) or F49R (40aaYaaD-REWEFE-DEWA).



**Figure S5:** Nucleation in artificial saliva. Calcium consumption in the presence of DEWA\_5 and variants F49Y (40aaYaaD-YEWEFE-DEWA) or F49H (40aaYaaD-HEWEFE-DEWA).