Supporting Information

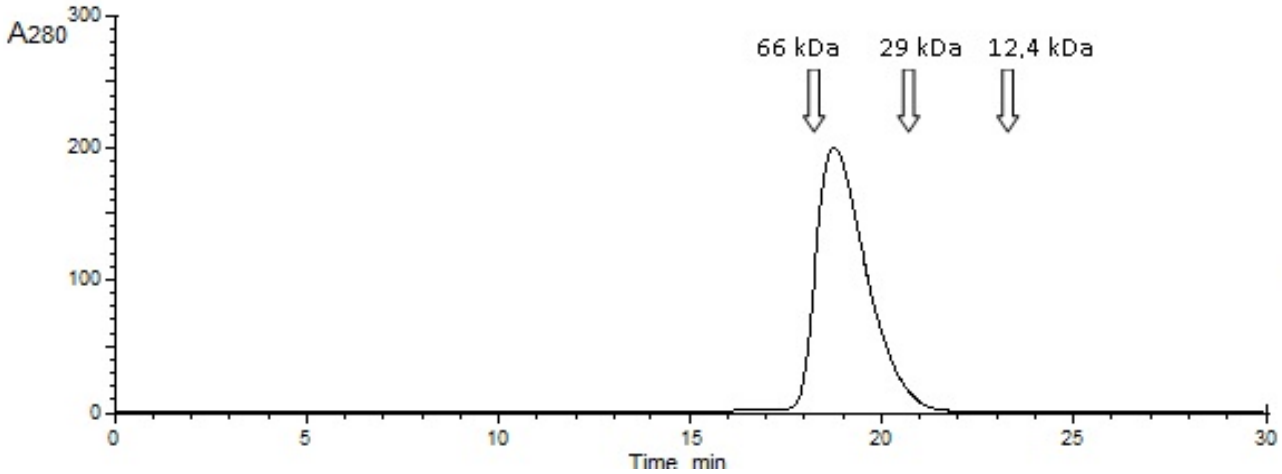

Fig. S1. Gel-filtration chromatography of Ins using column Biofox 17 SEC 9 (8x30 mm) in 0.05 M glycine buffer, pH 9.0. Release positions for the following proteins (calibration) are shown by arrows: cytochrome C (M_w 12.4 kDa), carbonic anhydrase (M_w 29 kDa), bovine serum albumin (M_w 66 kDa).

Adsorption time for protein adsorption experiments has been chosen to be 30 min because after 20 min of incubation the equilibrium has been reached (Fig. S2).

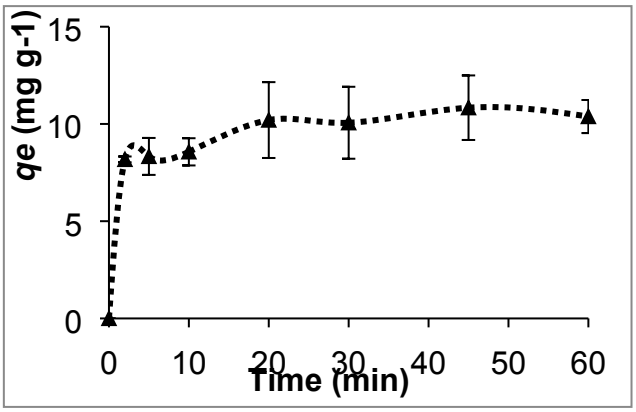

Fig. S2 . Ins adsorption on $CaCO_3$ microspheres as a function of incubation time. Conditions: 40 mg mL^{-1} $CaCO_3$, 1 mg mL^{-1} Ins, incubation time 30 min.

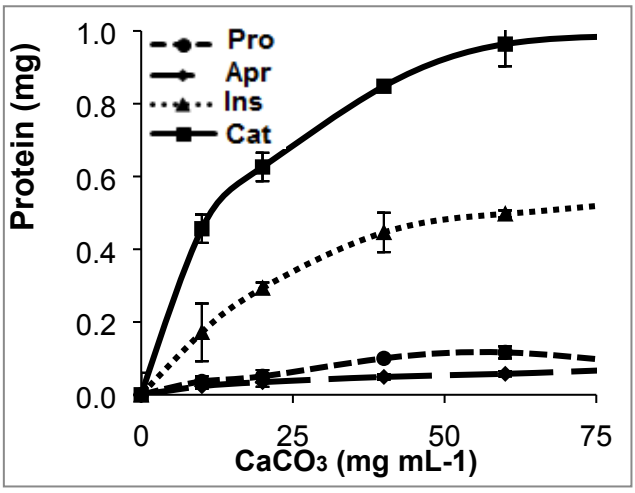

Fig. S3. The amount of adsorbed proteins as a function of concentration of $CaCO_3$ microspheres. Conditions: 1 mg mL^{-1} protein, incubation time 30 min.

Table S1. Parameters of protein adsorption (q_m, K_a, and $1/K_a$) and coefficient of determination r^2 for three different representations of Langmuir equation.

Presentation of the Langmuir equation, y=b+ax	Protein	q_m, mg g^{-1}	K_a, L mol^{-1}	r^2
$\frac{1}{q_e} = \frac{1}{q_m} + \frac{K_a}{q_m}(\frac{1}{C_e})$	Pro	2.6±0.4	(4.5±0.5)*10^3	0.8366
	Apr	0.8±0.1	(18±2)*10^3	0.8501
	Ins	20±3	(74±8)*10^3	0.9564
	Cat	37±2	(2110±150)*10^3	0.9920
$q_e = q_m + K_a \frac{q_e}{C_e}$	Pro	2.2±0.3	(9.4±1.0)*10^3	0.8676
	Apr	1.0±0.1	(15±2)*10^3	0.9334
	Ins	21±2	(68±5)*10^3	0.9786
	Cat	35±3	(2320±210)*10^3	0.9956
$\frac{C_e}{q_e} = \frac{1}{K_a * q_m} + \frac{C_e}{q_m}$	Pro	3.4±0.5	(5.3±0.8)*10^3	0.9557
	Apr	1.1±0.3	(11±2)*10^3	0.9518
	Ins	23±2	(60±5)*10^3	0.9872
	Cat	34±2	(2380±150)*10^3	0.9950