A Additional file 1

Table 1. Patient characteristics at the time of examination. The samples were taken at the time point of diagnosis. The patients are categorised according to their CKD stage: Group I "good" stage 1+2, n=5 (P004, P007, P011, P017, P020), Group II intermediate stage 3, n=4 (P001, P005, P013, P016) and Group III bad stage 4+5, n=1 (P006). Apart from P007, which presented an acute kidney injury, all patients had a chronically damaged kidney.

Patient	Age	Gender	Disease type	Isotype	FLC Serum [mg/l]	FLC Urine [mg/l]	TPU [g/24h]	Kidney function creatinin [mg/dl]	GFR-CKD-EPI [ml/min]	CKD Stadium	Kidney function recovered? Improvement = 30%	Kidney function recovered Creatinine [mg/dl]
P001	47	male	MM	λ	3750	1060	13	1.3	50	3	Yes	0.9
P004	72	male	MM	κ	5280	7650	4	1.1	90	1	Yes	0.9
P005	65	female	MM	κ	1250	6140	3	1.2	48	3	n/a	acute kidney injury
P006	66	female	MM	κ	2460	6880	3	1.9	27	4	Yes	1.3
P007	54	male	MM	κ	898	n/a	1	1	83	2	No	1.3
P011	45	female	AL	λ	120	n/a	6.2	0.7	108	1	No	0.8
P013	65	male	MM	κ	11000	n/a	3	1.5	50	3	No	1.7
P016	59	male	MM	κ	1150	175	3	1.6	45	3	No	1.2
P017	72	female	MM	κ	1380	n/a	4	0.7	90	1	No	0.8
P020	64	female	MM	κ	4120	n/a	2.4	0.8	74	2	n/a	0.9

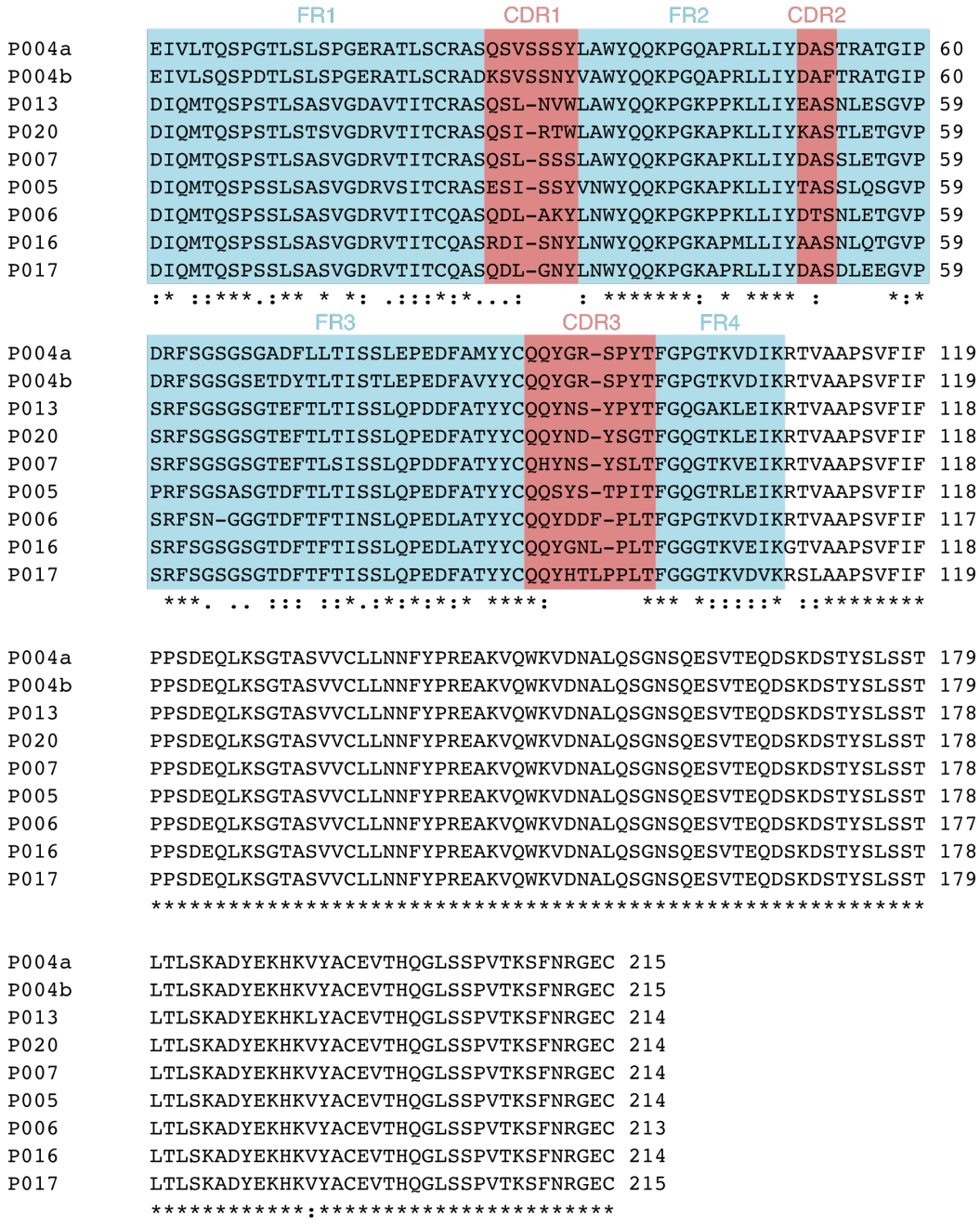

Figure A.1. Full length sequence alignment of the κ light chains of our study. The framework regions (FR) are marked with blue, the complementarity determining regions (CDRs) with red.

Figure A.2. Full length sequence alignment of the λ light chains of our study. The framework regions (FR) are marked with blue, the complementarity determining regions (CDRs) with red.

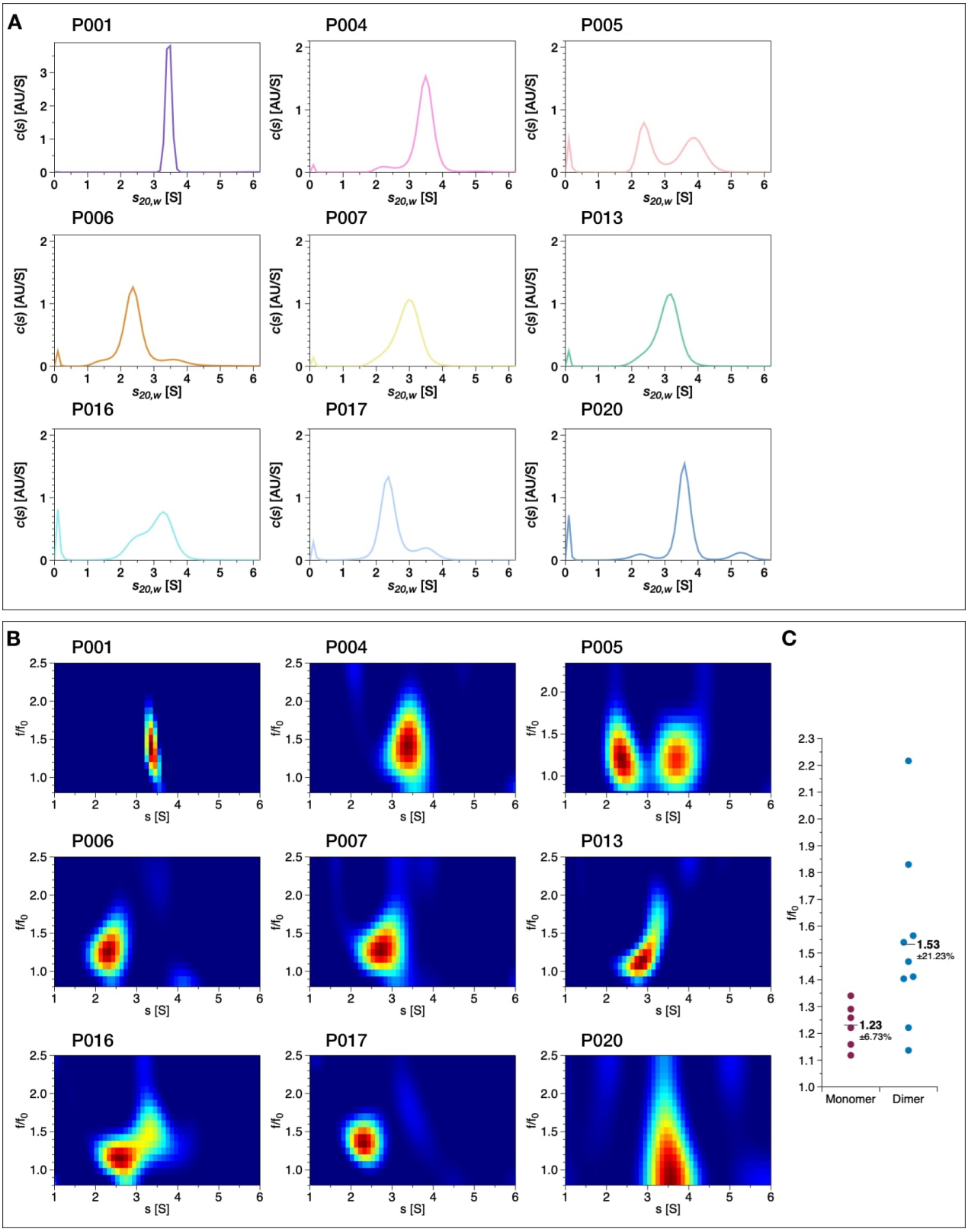

Figure A.3. (A) Distribution of sedimentation coefficients (c(s)) of the IgLC samples of this study and (B) application of the c(s, f/f_0)-model determined by sedimentation velocity experiments at 60.000 rpm. We find that the form factors of the dimers differ within the sample set. The dimers can appear very globular e.g. P020 with a f/f_0 of 1.14 or elongated such as P006 f/f_0 of 2.22 and P007, P013 and P017 f/f_0 between 1.54 and 1.83. However the signal for the dimer of P006 is very low. (C) shows the variation of f/f_0 between the dimers compared to the monomers. The monomers of P004 and P020 were excluded due to their low signal intensity.

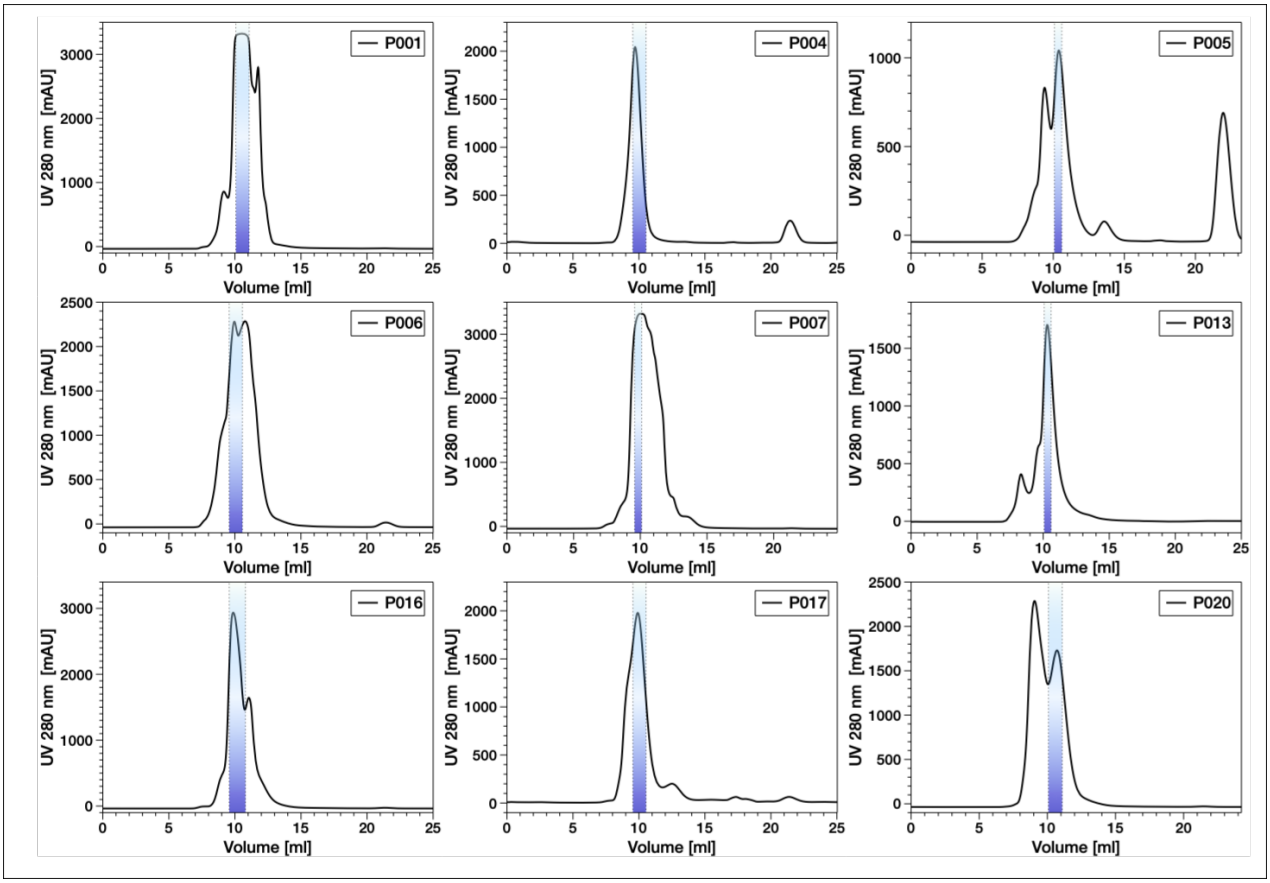

Figure A.4. Size exclusion chromatograms of the different IgLC samples of this study. The fractions used for the remaining experiments in this study are marked in blue