SUPPLEMENTAL MATERIAL

Amara et al., http://www.jem.org/cgi/content/full/jem.20121486/DC1

Table S1.   Patient characteristics

Patient	Gender	Age	Disease duration	HLA–DR	CCP2	CEP–1	cit–vim	cit–fib
		yr			*AU*	*AU*	*AU*	*AU*
ACPA+								
RA1325	F	47	11	*01/*15	1,387	12	59	135
RA1276	F	37	28	*04/*14	533	267	97	72
RA1103	F	37	3	*04/*01	337	34	349	299
ACPA−								
RA663	F	41	17	*01/*01	5	0	0	0
RA1362	M	36	9	*01/*03	9	0	2	0
RA1026	F	41	6	*01/*03	2.2	0	0	0

AU, arbitrary units. Patients were considered anti-CCP positive when their antibody titers in synovial fluid were >25 AU; patients were considered anti–CEP-1 positive when their antibody titers in synovial fluid were >3.5 AU; patients were considered cit-vim positive when their antibody titers in synovial fluid were >9 AU; patients were considered cit-fib positive when their antibody titers in synovial fluid were >7.2 AU.

Table S2.   Kinetic rates and affinity of synovial IgG antibodies to CEP-1, cit-fib, and cit-vim measured by SPR

Clone	CEP–1				cit–fib				cit–vim			
	Ka	Kd	K_d	χ^2	Ka	Kd	K_d	χ^2	Ka	Kd	K_d	χ^2
	per M/s	*per s*	*M*		*per M/s*	*per s*	*M*		*per M/s*	*per s*	*M*	
1103SF-A03	7.19×10^5	0.0306	4.3×10^{-8}	0.51	4.20×10^7	0.6687	1.5×10^{-8}	0.14	5.37×10^6	0.3233	6.1×10^{-8}	3.28
1103SF-A04	5.93×10^5	0.0050	8.5×10^{-9}	1.11	1.42×10^3	0.0079	5.5×10^{-6}	0.01	8.32×10^6	0.2133	2.6×10^{-8}	1.55
1103SF-B02	1.32×10^7	0.0399	3.1×10^{-9}	1.24	9.04×10^4	9.11×10^{-5}	1.1×10^{-9}	0.01	9.97×10^5	1.06×10^{-4}	1.1×10^{-10}	0.17
1103SF-B03	9.84×10^5	0.1906	1.9×10^{-7}	2.22	4.60×10^6	0.0074	1.6×10^{-9}	2.75	1.01×10^5	0.0901	8.9×10^{-7}	4.21
1103SF-B04	7.63×10^4	0.1694	2.2×10^{-6}	7.21	9.16×10^4	0.0017	1.9×10^{-8}	1.22	9.96×10^4	0.0010	1.1×10^{-8}	1.06
1104SF-H05	38.42	9.48×10^{-6}	2.5×10^{-7}	0.01	23.67	3.06×10^{-5}	1.2×10^{-6}	0.13	35.20	5.57×10^{-7}	1.6×10^{-8}	0.09
1276SF-A09	7.34×10^5	0.2452	3.3×10^{-7}	3.52	1.80×10^5	0.0291	1.6×10^{-7}	0.98	2.34×10^5	0.0433	1.8×10^{-7}	2.23
1276SF-B01	1.72×10^3	1.09×10^{-5}	6.3×10^{-9}	0.79	1.09×10^6	0.0248	2.2×10^{-8}	0.05	2.12×10^5	0.0971	4.6×10^{-7}	0.27
1276SF-C07	5.62×10^5	0.0354	2.7×10^{-8}	0.34	1.16×10^3	6.43×10^{-4}	5.5×10^{-7}	1.68	1.52×10^3	2.39×10^{-3}	1.6×10^{-6}	0.01
1276SF-D10	2.16×10^7	0.0128	5.9×10^{-10}	0.64	8.93×10^6	0.0268	3.1×10^{-9}	0.01	1.04×10^7	0.1612	1.5×10^{-8}	0.73
1276SF-F12	1.42×10^7	0.4386	3.1×10^{-8}	5.91	1.02×10^3	0.0393	3.8×10^{-5}	0.18	2.46×10^5	0.0790	3.2×10^{-7}	5.77
1276SF-G08	5.99×10^5	0.1128	1.8×10^{-7}	3.82	7.52×10^4	9.77×10^{-5}	1.3×10^{-9}	0.01	1.66×10^5	0.0011	6.9×10^{-9}	0.12
1276SF-H10	2.79×10^4	0.0785	2.8×10^{-6}	0.05	3.27×10^3	0.0069	2.1×10^{-6}	0.01	1.68×10^5	0.0271	1.6×10^{-7}	0.03
1325SF-B109	5.82×10^6	0.0523	9.0×10^{-9}	0.01	4.57×10^6	0.2939	6.4×10^{-8}	0.89	1.16×10^5	0.0292	2.5×10^{-7}	0.01
1325SF-B117	4.94×10^4	0.0197	4.1×10^{-7}	0.02	2.37×10^4	0.0120	5.1×10^{-7}	0.03	3.48×10^4	0.0152	3.9×10^{-7}	0.02
1325SF-C127	2.60×10^4	0.0352	1.3×10^{-6}	0.01	1.05×10^4	0.0284	2.7×10^{-6}	0.01	2.08×10^4	0.0324	1.5×10^{-6}	0.12
1325SF-B07	1.37×10^4	0.0199	1.4×10^{-6}	0.01	9.97×10^3	0.0014	1.5×10^{-7}	0.01	7.16×10^3	0.0267	3.7×10^{-6}	0.01
1325SF-H07	3.71×10^4	7.34×10^{-3}	1.9×10^{-8}	0.03	6.37×10^3	4.01×10^{-4}	6.3×10^{-8}	0.04	1.02×10^5	0.0019	1.9×10^{-8}	0.79

Ka, association rate; Kd, dissociation rate; M, mol/l. A χ^2 value < 10 indicates that the fitting model used adequately describes the experimental data.

Table S3, included as a separate Excel file, shows sequence data and reactivity of IgG antibodies from synovial memory B cells of RA patients.