

Table S1. ^{15}N Relaxation Data of *Escherichia coli* Adenylate Kinase Obtained at Magnetic Fields of 14.10 and 18.79 T

Residue	14.10 T			18.79 T		
	T_1 , ms	T_2 , ms	NOE	T_1 , ms	T_2 , ms	NOE
2 R	1249.7 ± 37.6	54.10 ± 1.29	0.7735 ± 0.0093	1848.5 ± 51.4	43.35 ± 0.97	0.7967 ± 0.0073
3 I	1184.7 ± 35.4	54.43 ± 1.32	0.7935 ± 0.0095	1779.6 ± 49.2	44.72 ± 1.01	0.8266 ± 0.0075
4 I	1187.4 ± 35.2	54.49 ± 1.33	0.7556 ± 0.0115	1689.9 ± 47.1	44.68 ± 1.09	0.6795 ± 0.0069
5 L	1167.6 ± 34.6	51.96 ± 1.21	0.7811 ± 0.0094	1751.6 ± 47.6	40.02 ± 0.91	0.8244 ± 0.0074
6 L	1141.3 ± 33.7	55.70 ± 1.38	0.7826 ± 0.0094	1667.9 ± 45.9	44.36 ± 1.00	0.8010 ± 0.0074
7 G	1200.3 ± 36.6	55.81 ± 1.38	0.7415 ± 0.0089	1766.7 ± 50.0	43.81 ± 0.98	0.7185 ± 0.0071
8 A	1169.4 ± 34.5	55.72 ± 1.37	0.7117 ± 0.0085	1654.2 ± 45.5	44.80 ± 1.01	0.7621 ± 0.0072
11 A	1287.1 ± 38.4	47.49 ± 1.02	0.7645 ± 0.0092	1640.5 ± 45.2	39.06 ± 0.91	0.7635 ± 0.0072
12 G	1068.2 ± 31.0	61.84 ± 1.62	0.7382 ± 0.0089	1736.7 ± 47.5	43.70 ± 1.02	0.7599 ± 0.0073
15 T	1090.3 ± 32.6	50.66 ± 1.15	0.7170 ± 0.0086	1573.1 ± 42.4	36.82 ± 0.84	0.6938 ± 0.0069
16 Q	1082.9 ± 31.7	48.95 ± 1.09	0.7192 ± 0.0086	1512.6 ± 41.3	35.71 ± 0.82	0.7579 ± 0.0071
17 A	1182.6 ± 35.1	50.84 ± 1.17	0.6948 ± 0.0083	1579.0 ± 43.4	51.17 ± 1.19	0.6441 ± 0.0068
18 Q	1232.2 ± 36.7	51.37 ± 1.19	0.7413 ± 0.0096	1749.4 ± 48.0	41.82 ± 0.95	0.7983 ± 0.0073
19 F	1158.0 ± 34.1	53.30 ± 1.27	0.7659 ± 0.0092	1642.7 ± 45.3	42.37 ± 0.96	0.7991 ± 0.0074
20 I	1085.7 ± 31.7	53.73 ± 1.28	0.7295 ± 0.0088	1480.3 ± 40.6	44.61 ± 1.02	0.7488 ± 0.0071
21 M	1091.1 ± 31.8	48.22 ± 1.06	0.7885 ± 0.0095	1725.5 ± 47.3	39.62 ± 0.90	0.8293 ± 0.0075
22 E	1220.1 ± 36.2	49.94 ± 1.12	0.7875 ± 0.0095	1754.9 ± 47.7	40.35 ± 0.92	0.7934 ± 0.0072
23 K	1150.4 ± 34.1	52.00 ± 1.21	0.7462 ± 0.0131	1715.9 ± 46.7	41.39 ± 0.94	0.7599 ± 0.0073
24 Y	1225.4 ± 36.6	52.13 ± 1.23	0.7483 ± 0.0105	1806.7 ± 49.3	41.96 ± 0.95	0.8004 ± 0.0074
25 G	1305.5 ± 39.2	48.30 ± 1.06	0.7737 ± 0.0093	1846.4 ± 51.5	38.24 ± 0.88	0.7921 ± 0.0073
26 I	1338.0 ± 40.4	52.41 ± 1.25	0.7421 ± 0.0152	1916.1 ± 53.6	41.43 ± 0.94	0.7619 ± 0.0072
28 Q	1221.7 ± 36.4	56.11 ± 1.39	0.7214 ± 0.0108	1752.2 ± 48.6	45.97 ± 1.03	0.7427 ± 0.0072
29 I	1162.7 ± 34.5	55.82 ± 1.39	0.7552 ± 0.0095	1711.8 ± 46.5	45.04 ± 1.02	0.7749 ± 0.0072
30 S	1080.4 ± 31.9	57.81 ± 1.47	0.6888 ± 0.0083	1548.8 ± 42.7	52.25 ± 1.18	0.6884 ± 0.0070
31 T	1324.6 ± 39.7	43.55 ± 1.00	0.7251 ± 0.0087	1812.9 ± 50.9	39.19 ± 0.91	0.7781 ± 0.0073
32 G	1077.3 ± 32.1	51.90 ± 1.20	0.7523 ± 0.0119	1465.7 ± 42.0	42.14 ± 0.97	0.7551 ± 0.0074
33 D	1044.9 ± 30.9	57.37 ± 1.44	0.7158 ± 0.0086	1435.5 ± 39.7	45.13 ± 1.01	0.7626 ± 0.0072
34 M	1125.8 ± 33.2	52.35 ± 1.22	0.6503 ± 0.0078	1419.3 ± 38.4	48.72 ± 1.12	0.6291 ± 0.0067
36 R	1167.5 ± 34.4	53.39 ± 1.27	0.7450 ± 0.0089	1629.4 ± 44.1	42.74 ± 0.97	0.7697 ± 0.0072
37 A	1085.7 ± 31.7	53.73 ± 1.28	0.7295 ± 0.0088	1480.3 ± 40.6	44.61 ± 1.02	0.7488 ± 0.0071
38 A	1126.0 ± 33.1	54.69 ± 1.33	0.7123 ± 0.0085	1533.3 ± 42.3	44.65 ± 1.01	0.7361 ± 0.0071
39 V	1141.7 ± 33.6	52.91 ± 1.26	0.6756 ± 0.0081	1562.9 ± 43.2	43.31 ± 0.98	0.7193 ± 0.0071
40 K	1116.5 ± 32.6	53.04 ± 1.25	0.6793 ± 0.0082	1483.2 ± 39.9	42.92 ± 0.97	0.7096 ± 0.0070
41 S	1059.3 ± 31.0	63.23 ± 1.68	0.5810 ± 0.0070	1403.9 ± 38.8	50.41 ± 1.12	0.6320 ± 0.0067
42 G	1064.1 ± 31.9	59.15 ± 1.50	0.5452 ± 0.0065	1397.9 ± 38.6	45.50 ± 1.03	0.5892 ± 0.0067
43 S	1167.1 ± 34.6	53.02 ± 1.25	0.5562 ± 0.0067	1511.3 ± 41.3	45.41 ± 1.06	0.5752 ± 0.0066

Residue	14.10 T			18.79 T		
	T_1 , ms	T_2 , ms	NOE	T_1 , ms	T_2 , ms	NOE
44 E	1080.9 ± 32.2	57.53 ± 1.45	0.5757 ± 0.0069	1401.5 ± 39.4	45.50 ± 1.03	0.7322 ± 0.0070
45 L	1063.8 ± 30.9	58.23 ± 1.47	0.6069 ± 0.0084	1437.4 ± 38.9	46.54 ± 1.04	0.6423 ± 0.0068
46 G	1095.5 ± 32.0	55.81 ± 1.37	0.6469 ± 0.0078	1504.1 ± 41.6	43.17 ± 0.98	0.6870 ± 0.0069
47 K	1098.0 ± 32.0	52.95 ± 1.25	0.6455 ± 0.0077	1464.9 ± 39.8	43.55 ± 1.00	0.6686 ± 0.0068
48 Q	1196.9 ± 35.5	52.74 ± 1.24	0.6937 ± 0.0083	1792.8 ± 49.7	41.25 ± 0.94	0.7103 ± 0.0070
49 V	1061.2 ± 30.9	55.79 ± 1.37	0.6160 ± 0.0074	1419.3 ± 38.4	48.72 ± 1.12	0.6291 ± 0.0067
50 K	1102.4 ± 32.2	54.69 ± 1.33	0.6239 ± 0.0075	1499.1 ± 40.5	43.66 ± 0.99	0.6724 ± 0.0069
51 D	1119.3 ± 32.9	53.05 ± 1.26	0.6333 ± 0.0076	1513.6 ± 40.8	43.13 ± 0.98	0.6618 ± 0.0069
52 I	1087.0 ± 31.7	59.41 ± 1.52	0.6451 ± 0.0077	1506.1 ± 40.7	46.68 ± 1.04	0.6876 ± 0.0069
53 M	1153.1 ± 34.0	54.72 ± 1.33	0.6338 ± 0.0089	1462.3 ± 40.0	43.00 ± 0.98	0.6509 ± 0.0068
54 D	1139.3 ± 33.4	53.86 ± 1.29	0.6133 ± 0.0074	1498.0 ± 41.1	43.45 ± 0.98	0.6478 ± 0.0068
55 A	1143.1 ± 33.7	55.24 ± 1.34	0.5971 ± 0.0072	1504.5 ± 40.7	43.49 ± 0.97	0.6499 ± 0.0068
56 G	1068.2 ± 31.0	61.84 ± 1.62	0.6294 ± 0.0076	1443.7 ± 39.7	47.98 ± 1.07	0.6704 ± 0.0069
57 K	1126.9 ± 33.1	60.59 ± 1.58	0.6211 ± 0.0075	1493.9 ± 40.6	48.21 ± 1.08	0.6688 ± 0.0068
58 L	1161.4 ± 34.2	72.89 ± 1.88	0.4122 ± 0.0049	1476.6 ± 40.1	57.99 ± 1.27	0.4594 ± 0.0062
59 V	1216.1 ± 36.2	63.66 ± 1.70	0.4092 ± 0.0049	1524.3 ± 41.9	52.35 ± 1.17	0.4186 ± 0.0061
60 T	1128.6 ± 33.2	60.00 ± 1.57	0.5830 ± 0.0070	1492.1 ± 41.1	47.45 ± 1.06	0.6232 ± 0.0067
61 D	1092.5 ± 32.3	58.04 ± 1.47	0.7416 ± 0.0089	1554.5 ± 43.3	46.43 ± 1.05	0.7339 ± 0.0071
62 E	1132.6 ± 33.3	53.88 ± 1.30	0.7404 ± 0.0106	1607.0 ± 43.8	42.75 ± 0.97	0.7581 ± 0.0072
63 L	1130.6 ± 33.1	53.90 ± 1.30	0.7474 ± 0.0090	1583.4 ± 43.0	43.17 ± 0.98	0.7798 ± 0.0072
64 V	1135.1 ± 33.4	54.22 ± 1.30	0.7614 ± 0.0091	1633.4 ± 44.7	42.67 ± 0.96	0.7970 ± 0.0072
65 I	1140.1 ± 33.6	52.09 ± 1.22	0.7598 ± 0.0091	1669.2 ± 45.6	42.20 ± 0.96	0.8064 ± 0.0074
66 A	1102.9 ± 32.1	52.70 ± 1.25	0.7847 ± 0.0094	1582.9 ± 43.0	41.31 ± 0.94	0.8061 ± 0.0074
67 L	1209.5 ± 36.0	49.94 ± 1.13	0.6707 ± 0.0080	1323.3 ± 37.4	44.16 ± 1.00	0.5182 ± 0.0064
68 V	1114.5 ± 32.8	53.28 ± 1.28	0.7807 ± 0.0094	1621.5 ± 44.3	44.16 ± 1.00	0.7950 ± 0.0073
69 K	1149.3 ± 33.9	52.07 ± 1.21	0.7716 ± 0.0093	1634.7 ± 44.7	41.95 ± 0.95	0.8031 ± 0.0074
71 R	1287.1 ± 38.4	47.49 ± 1.02	0.7645 ± 0.0092	1803.6 ± 50.0	39.06 ± 0.91	0.7635 ± 0.0072
72 I	1100.4 ± 32.4	51.08 ± 1.18	0.8064 ± 0.0097	1607.9 ± 44.0	40.44 ± 0.92	0.8275 ± 0.0075
73 A	1115.3 ± 32.7	50.25 ± 1.14	0.8075 ± 0.0097	1599.7 ± 44.0	39.49 ± 0.90	0.8321 ± 0.0075
74 Q	1226.0 ± 36.6	52.89 ± 1.26	0.7814 ± 0.0094	1779.8 ± 48.6	42.51 ± 0.96	0.8060 ± 0.0074
75 E	1157.1 ± 35.2	54.76 ± 1.33	0.7476 ± 0.0090	1682.7 ± 47.3	43.36 ± 0.99	0.7552 ± 0.0072
77 C	1255.0 ± 37.2	52.19 ± 1.21	0.7841 ± 0.0094	1802.1 ± 48.8	42.00 ± 0.96	0.8032 ± 0.0073
78 R	1160.3 ± 34.2	52.47 ± 1.23	0.7583 ± 0.0091	1646.0 ± 44.6	42.01 ± 0.95	0.7974 ± 0.0073
79 N	1210.6 ± 36.4	54.06 ± 1.29	0.7092 ± 0.0085	1723.6 ± 48.6	43.25 ± 0.98	0.7531 ± 0.0073
80 G	1212.2 ± 36.0	56.31 ± 1.39	0.7314 ± 0.0088	1724.9 ± 47.1	44.06 ± 0.99	0.7287 ± 0.0071
81 F	1183.1 ± 35.2	55.31 ± 1.36	0.7779 ± 0.0093	1709.9 ± 46.4	43.18 ± 0.97	0.8143 ± 0.0074
82 L	1173.4 ± 34.9	52.98 ± 1.26	0.8054 ± 0.0098	1759.4 ± 48.0	43.08 ± 0.99	0.8446 ± 0.0075
83 L	1153.2 ± 34.2	55.37 ± 1.37	0.7917 ± 0.0095	1721.6 ± 47.2	43.85 ± 0.99	0.8139 ± 0.0074
84 D	1111.2 ± 32.7	56.40 ± 1.39	0.7692 ± 0.0092	1614.3 ± 44.0	46.25 ± 1.04	0.7947 ± 0.0074
85 G	975.0 ± 28.7	65.79 ± 1.75	0.6643 ± 0.0080	1337.1 ± 37.3	54.00 ± 1.20	0.6962 ± 0.0069

Residue	14.10 T			18.79 T		
	T_1 , ms	T_2 , ms	NOE	T_1 , ms	T_2 , ms	NOE
86 F	1077.9 ± 31.4	54.51 ± 1.32	0.7585 ± 0.0091	1515.5 ± 41.0	43.13 ± 0.97	0.7884 ± 0.0072
88 R	1128.9 ± 33.2	57.90 ± 1.46	0.6576 ± 0.0079	1564.3 ± 42.9	47.01 ± 1.05	0.6950 ± 0.0070
89 T	1192.5 ± 35.3	58.79 ± 1.50	0.6795 ± 0.0082	1671.7 ± 46.0	45.77 ± 1.03	0.7243 ± 0.0071
90 I	1201.5 ± 35.8	52.73 ± 1.24	0.7717 ± 0.0093	1727.9 ± 47.1	42.60 ± 0.96	0.7734 ± 0.0071
92 Q	1247.1 ± 37.0	48.71 ± 1.08	0.7992 ± 0.0096	1794.2 ± 49.4	39.94 ± 0.91	0.8144 ± 0.0075
93 A	1163.2 ± 34.4	52.19 ± 1.22	0.6841 ± 0.0082	1657.4 ± 45.2	42.04 ± 0.97	0.7764 ± 0.0072
94 D	1219.1 ± 36.5	44.75 ± 0.85	0.7740 ± 0.0093	1735.7 ± 47.9	37.06 ± 0.85	0.7945 ± 0.0073
96 M	1209.5 ± 36.0	49.94 ± 1.13	0.6707 ± 0.0080	1323.3 ± 37.4	36.46 ± 0.84	0.7791 ± 0.0073
97 K	1199.2 ± 35.7	52.74 ± 1.24	0.7334 ± 0.0088	1682.9 ± 46.6	41.69 ± 0.94	0.7820 ± 0.0073
98 E	1218.3 ± 36.2	48.63 ± 1.07	0.7234 ± 0.0136	1765.4 ± 48.4	39.73 ± 0.91	0.7509 ± 0.0072
99 A	1249.4 ± 37.4	53.81 ± 1.30	0.7214 ± 0.0087	1708.7 ± 48.0	41.72 ± 0.95	0.7571 ± 0.0072
100 G	1136.4 ± 33.4	56.29 ± 1.39	0.7561 ± 0.0091	1633.5 ± 44.6	44.00 ± 0.98	0.7617 ± 0.0072
101 I	1120.8 ± 32.9	48.14 ± 1.05	0.7392 ± 0.0089	1510.6 ± 41.7	41.45 ± 0.98	0.7655 ± 0.0072
102 N	1210.5 ± 36.1	60.83 ± 1.60	0.7110 ± 0.0085	1653.0 ± 45.6	48.62 ± 1.10	0.7242 ± 0.0071
103 V	1231.8 ± 36.8	57.25 ± 1.76	0.5777 ± 0.0083	1668.2 ± 46.0	54.17 ± 1.20	0.6040 ± 0.0066
104 D	1180.4 ± 35.1	54.43 ± 1.31	0.7671 ± 0.0092	1711.6 ± 47.7	44.28 ± 1.00	0.8112 ± 0.0074
105 Y	1222.5 ± 36.5	53.30 ± 1.27	0.7675 ± 0.0092	1749.4 ± 48.0	41.82 ± 0.95	0.7983 ± 0.0073
106 V	1241.9 ± 37.3	55.99 ± 1.37	0.7973 ± 0.0102	1891.7 ± 52.0	46.94 ± 1.06	0.8130 ± 0.0074
107 L	1201.0 ± 35.6	53.26 ± 1.26	0.8041 ± 0.0096	1805.9 ± 49.2	43.47 ± 0.98	0.8164 ± 0.0074
108 E	1192.4 ± 35.7	54.68 ± 1.32	0.7915 ± 0.0095	1819.9 ± 50.3	44.56 ± 1.00	0.8290 ± 0.0074
109 F	1201.5 ± 35.8	51.05 ± 1.17	0.8073 ± 0.0097	1818.2 ± 50.1	41.42 ± 0.94	0.8207 ± 0.0075
110 D	1166.9 ± 34.6	55.30 ± 1.35	0.7752 ± 0.0093	1715.0 ± 47.0	43.68 ± 0.99	0.8063 ± 0.0073
111 V	1279.2 ± 38.4	55.14 ± 1.34	0.7749 ± 0.0095	1886.7 ± 52.7	43.93 ± 0.98	0.7844 ± 0.0073
113 D	1214.8 ± 36.5	52.92 ± 1.26	0.7805 ± 0.0094	1731.9 ± 47.9	42.86 ± 0.97	0.8206 ± 0.0074
114 D	1220.0 ± 36.2	50.91 ± 1.17	0.7860 ± 0.0094	1771.7 ± 48.3	40.57 ± 0.92	0.8141 ± 0.0073
115 L	1266.3 ± 37.9	44.72 ± 0.98	0.7989 ± 0.0096	1814.5 ± 50.3	36.78 ± 0.84	0.8103 ± 0.0075
116 I	1231.5 ± 36.6	50.66 ± 1.16	0.7930 ± 0.0095	1772.9 ± 48.3	41.08 ± 0.92	0.7986 ± 0.0074
117 V	1186.0 ± 35.0	49.69 ± 1.11	0.7973 ± 0.0096	1746.3 ± 47.8	40.68 ± 0.93	0.8180 ± 0.0075
118 D	1135.8 ± 33.5	52.41 ± 1.22	0.6507 ± 0.0146	1790.2 ± 49.7	38.71 ± 0.88	0.8017 ± 0.0073
120 I	1296.3 ± 38.8	47.80 ± 1.03	0.7704 ± 0.0092	1871.0 ± 52.2	39.25 ± 0.89	0.8040 ± 0.0073
121 V	1174.3 ± 34.8	43.76 ± 0.75	0.7732 ± 0.0093	1708.0 ± 46.5	33.91 ± 0.78	0.8156 ± 0.0074
122 G	1195.3 ± 35.6	39.34 ± 1.11	0.7378 ± 0.0089	1739.0 ± 47.4	30.12 ± 0.76	0.7943 ± 0.0074
123 R	1160.1 ± 34.2	47.90 ± 1.04	0.7261 ± 0.0087	1594.0 ± 43.3	37.85 ± 0.86	0.7588 ± 0.0072
124 R	1109.9 ± 32.4	57.43 ± 1.45	0.6645 ± 0.0080	1584.8 ± 42.2	45.97 ± 1.03	0.7084 ± 0.0070
125 V	1089.2 ± 31.7	58.59 ± 1.49	0.6407 ± 0.0077	1489.4 ± 40.6	46.79 ± 1.06	0.6865 ± 0.0070
126 H	1169.4 ± 34.5	55.72 ± 1.37	0.7117 ± 0.0085	1654.2 ± 45.5	44.80 ± 1.01	0.7621 ± 0.0072
127 A	1149.0 ± 33.9	57.36 ± 1.45	0.5896 ± 0.0071	1552.1 ± 42.4	44.81 ± 1.03	0.6287 ± 0.0067
129 S	1126.6 ± 33.0	57.81 ± 1.46	0.6128 ± 0.0081	1505.1 ± 41.3	44.25 ± 1.00	0.6618 ± 0.0069
130 G	1103.7 ± 32.2	53.76 ± 1.30	0.6357 ± 0.0076	1483.7 ± 41.0	42.66 ± 0.96	0.6878 ± 0.0069
131 R	1159.2 ± 34.4	51.76 ± 1.20	0.6015 ± 0.0072	1505.6 ± 40.7	44.05 ± 1.02	0.6993 ± 0.0069

Residue	14.10 T			18.79 T		
	T_1 , ms	T_2 , ms	NOE	T_1 , ms	T_2 , ms	NOE
132 V	1142.3 ± 33.6	63.77 ± 1.71	0.5872 ± 0.0070	1526.6 ± 41.8	51.72 ± 1.15	0.6318 ± 0.0068
133 Y	1149.3 ± 34.0	56.92 ± 1.41	0.6616 ± 0.0079	1544.9 ± 42.4	48.15 ± 1.08	0.6787 ± 0.0070
134 H	1153.1 ± 34.0	55.43 ± 1.35	0.6630 ± 0.0080	1598.4 ± 43.0	48.15 ± 1.08	0.6837 ± 0.0069
136 K	1194.8 ± 35.3	49.47 ± 1.10	0.6194 ± 0.0074	1602.4 ± 43.6	39.52 ± 0.91	0.6631 ± 0.0069
137 F	1194.9 ± 35.6	57.24 ± 1.43	0.5971 ± 0.0137	1677.2 ± 46.2	46.07 ± 1.03	0.6370 ± 0.0068
138 N	1128.9 ± 33.2	57.90 ± 1.46	0.6576 ± 0.0079	1564.3 ± 42.9	47.01 ± 1.05	0.6950 ± 0.0070
141 K	1147.1 ± 33.7	57.94 ± 1.47	0.6178 ± 0.0126	1585.7 ± 42.8	46.91 ± 1.05	0.6453 ± 0.0068
142 V	1236.3 ± 36.8	49.80 ± 1.11	0.7042 ± 0.0085	1702.3 ± 46.2	43.08 ± 0.97	0.7170 ± 0.0070
143 E	1258.8 ± 37.6	57.44 ± 1.44	0.5738 ± 0.0069	1693.5 ± 47.0	47.32 ± 1.06	0.5965 ± 0.0066
144 G	1218.6 ± 36.2	55.66 ± 1.37	0.6586 ± 0.0079	1711.9 ± 46.5	45.17 ± 1.01	0.6743 ± 0.0068
145 K	1184.2 ± 35.0	49.97 ± 1.13	0.7065 ± 0.0085	1615.3 ± 44.4	40.65 ± 0.93	0.7285 ± 0.0071
146 D	1139.7 ± 33.6	55.99 ± 1.38	0.6747 ± 0.0081	1583.7 ± 43.0	45.25 ± 1.02	0.6937 ± 0.0069
147 D	1233.3 ± 36.7	49.48 ± 1.10	0.7076 ± 0.0133	1722.0 ± 47.0	38.25 ± 0.87	0.7284 ± 0.0071
148 V	1251.8 ± 37.5	51.85 ± 1.22	0.6614 ± 0.0085	1692.1 ± 45.7	41.44 ± 0.94	0.7074 ± 0.0070
149 T	1232.1 ± 37.0	50.29 ± 1.14	0.6895 ± 0.0167	1751.3 ± 48.2	40.35 ± 0.92	0.7195 ± 0.0070
150 G	1130.3 ± 33.1	52.15 ± 1.21	0.6729 ± 0.0081	1534.4 ± 41.7	41.43 ± 0.94	0.7086 ± 0.0070
151 E	1293.2 ± 38.6	47.64 ± 1.03	0.7413 ± 0.0089	1895.6 ± 52.6	37.83 ± 0.87	0.7756 ± 0.0072
152 E	1179.2 ± 34.9	59.87 ± 1.55	0.6050 ± 0.0073	1598.7 ± 44.0	48.33 ± 1.08	0.6334 ± 0.0068
153 L	1250.5 ± 37.6	57.02 ± 1.47	0.5143 ± 0.0123	1664.1 ± 45.5	47.67 ± 1.09	0.5203 ± 0.0064
154 T	1115.1 ± 32.5	59.70 ± 1.54	0.6112 ± 0.0073	1513.2 ± 41.3	48.57 ± 1.08	0.6500 ± 0.0068
155 T	1125.9 ± 33.4	59.85 ± 1.54	0.6213 ± 0.0075	1559.3 ± 43.3	47.76 ± 1.06	0.6586 ± 0.0068
156 R	1094.1 ± 32.1	58.60 ± 1.51	0.6588 ± 0.0079	1493.1 ± 40.8	45.55 ± 1.02	0.6839 ± 0.0068
158 D	1040.2 ± 30.7	56.04 ± 1.39	0.5650 ± 0.0073	1395.9 ± 39.0	43.64 ± 0.99	0.5951 ± 0.0066
159 D	1182.2 ± 34.9	52.75 ± 1.24	0.6775 ± 0.0081	1649.8 ± 45.0	42.13 ± 0.96	0.7141 ± 0.0071
160 Q	1193.0 ± 35.3	58.19 ± 1.47	0.5081 ± 0.0061	1596.4 ± 43.8	46.09 ± 1.03	0.5554 ± 0.0065
161 E	1149.3 ± 34.0	56.92 ± 1.41	0.6616 ± 0.0079	1817.6 ± 52.2	48.15 ± 1.08	0.7490 ± 0.0071
162 E	1290.5 ± 38.6	47.57 ± 1.03	0.7273 ± 0.0087	1770.7 ± 49.3	37.65 ± 0.86	0.7504 ± 0.0072
163 T	1350.8 ± 40.7	48.78 ± 1.09	0.7212 ± 0.0087	1896.8 ± 52.5	38.65 ± 0.88	0.7505 ± 0.0072
164 V	1324.6 ± 39.7	43.55 ± 1.00	0.7251 ± 0.0087	1812.9 ± 50.9	39.19 ± 0.91	0.7781 ± 0.0073
165 R	1274.8 ± 38.2	45.09 ± 0.99	0.7695 ± 0.0092	1900.7 ± 53.0	37.08 ± 0.86	0.8100 ± 0.0074
166 K	1319.7 ± 39.5	45.32 ± 0.66	0.7384 ± 0.0089	1868.4 ± 51.3	42.94 ± 1.04	0.7389 ± 0.0071
167 R	1296.3 ± 38.8	47.80 ± 1.03	0.7704 ± 0.0092	1871.0 ± 52.2	39.25 ± 0.89	0.8040 ± 0.0073
170 E	1184.2 ± 35.0	49.97 ± 1.13	0.7065 ± 0.0085	1615.3 ± 44.4	40.65 ± 0.93	0.7285 ± 0.0071
172 H	1236.3 ± 36.8	49.80 ± 1.11	0.7042 ± 0.0085	1702.3 ± 46.2	43.08 ± 0.97	0.7170 ± 0.0070
173 Q	1287.8 ± 38.5	44.02 ± 0.79	0.7785 ± 0.0093	1922.1 ± 53.5	36.46 ± 0.84	0.7897 ± 0.0073
174 M	1329.1 ± 40.0	47.60 ± 1.03	0.7425 ± 0.0089	1923.3 ± 53.1	37.01 ± 0.85	0.7980 ± 0.0073
175 T	1310.4 ± 39.4	47.84 ± 1.04	0.7235 ± 0.0087	1851.9 ± 51.8	38.10 ± 0.87	0.7493 ± 0.0071
176 A	1199.3 ± 35.6	48.85 ± 1.08	0.7758 ± 0.0093	1679.3 ± 45.9	38.63 ± 0.88	0.8177 ± 0.0074
178 L	1285.7 ± 38.6	47.83 ± 1.04	0.7694 ± 0.0108	1823.1 ± 50.9	38.63 ± 0.87	0.8197 ± 0.0073
179 I	1153.1 ± 34.0	55.43 ± 1.35	0.6630 ± 0.0080	1598.4 ± 43.0	48.15 ± 1.08	0.6837 ± 0.0069

Residue	14.10 T			18.79 T		
	T_1 , ms	T_2 , ms	NOE	T_1 , ms	T_2 , ms	NOE
180 G	1185.4 ± 35.0	50.90 ± 1.18	0.7911 ± 0.0095	1721.6 ± 47.2	39.39 ± 0.90	0.8326 ± 0.0074
181 Y	1210.5 ± 36.1	60.83 ± 1.60	0.7110 ± 0.0085	1653.0 ± 45.6	48.62 ± 1.10	0.7242 ± 0.0071
182 Y	1233.2 ± 36.8	45.37 ± 0.90	0.8008 ± 0.0096	1829.5 ± 50.0	36.83 ± 0.86	0.8240 ± 0.0074
183 S	1161.8 ± 34.3	50.80 ± 1.16	0.7779 ± 0.0093	1623.8 ± 44.6	39.69 ± 0.91	0.7992 ± 0.0073
185 E	1229.3 ± 36.6	48.51 ± 1.06	0.7265 ± 0.0087	1724.5 ± 47.8	42.13 ± 0.97	0.7639 ± 0.0072
186 A	1198.3 ± 35.5	49.14 ± 1.08	0.7497 ± 0.0090	1677.8 ± 46.2	43.18 ± 1.00	0.7513 ± 0.0072
187 E	1159.7 ± 34.2	54.44 ± 1.32	0.7560 ± 0.0091	1603.9 ± 44.2	44.05 ± 0.99	0.7903 ± 0.0074
188 A	1147.7 ± 33.8	53.88 ± 1.30	0.7772 ± 0.0093	1653.2 ± 44.8	43.19 ± 0.97	0.8037 ± 0.0073
189 G	1279.2 ± 38.3	52.89 ± 1.26	0.7279 ± 0.0087	1768.4 ± 48.7	42.83 ± 0.97	0.7526 ± 0.0072
190 N	1244.6 ± 37.2	49.69 ± 1.11	0.7375 ± 0.0089	1431.0 ± 40.1	45.16 ± 1.03	0.7447 ± 0.0071
191 T	1077.6 ± 31.3	64.53 ± 1.73	0.6174 ± 0.0074	1459.1 ± 39.6	50.65 ± 1.14	0.6447 ± 0.0068
192 K	1159.6 ± 34.2	59.99 ± 1.55	0.7175 ± 0.0086	1636.9 ± 44.3	48.63 ± 1.09	0.7447 ± 0.0072
193 Y	1258.8 ± 37.5	56.26 ± 1.39	0.7168 ± 0.0086	1840.0 ± 50.8	47.53 ± 1.07	0.7523 ± 0.0072
194 A	1197.0 ± 35.6	51.78 ± 1.22	0.8025 ± 0.0096	1749.6 ± 47.6	43.62 ± 1.01	0.7768 ± 0.0073
195 K	1294.3 ± 38.9	56.79 ± 1.41	0.7305 ± 0.0088	1913.0 ± 53.2	47.03 ± 1.07	0.7583 ± 0.0072
196 V	1206.2 ± 35.9	56.38 ± 1.41	0.7025 ± 0.0089	1757.0 ± 48.6	45.29 ± 1.01	0.7209 ± 0.0071
197 D	1229.3 ± 36.9	55.87 ± 1.37	0.7598 ± 0.0091	1781.1 ± 49.5	45.14 ± 1.02	0.7802 ± 0.0073
198 G	1205.5 ± 36.0	56.89 ± 1.41	0.7536 ± 0.0090	1782.6 ± 48.8	45.97 ± 1.03	0.7669 ± 0.0073
199 T	1193.0 ± 35.4	48.67 ± 1.07	0.7652 ± 0.0092	1680.6 ± 46.1	38.60 ± 0.88	0.7942 ± 0.0074
200 K	1307.7 ± 39.2	45.90 ± 1.06	0.7540 ± 0.0090	1844.2 ± 50.9	37.37 ± 0.85	0.7755 ± 0.0072
202 V	1278.3 ± 38.9	48.84 ± 1.08	0.6969 ± 0.0084	1808.7 ± 51.6	43.68 ± 1.02	0.6762 ± 0.0069
203 A	1219.1 ± 36.5	44.75 ± 0.85	0.7740 ± 0.0093	1735.7 ± 47.9	37.06 ± 0.85	0.7945 ± 0.0073
204 E	1268.1 ± 37.9	49.47 ± 1.12	0.7295 ± 0.0088	1832.5 ± 50.6	39.48 ± 0.89	0.7618 ± 0.0072
205 V	1315.9 ± 39.7	47.17 ± 1.02	0.7178 ± 0.0086	1772.6 ± 49.6	39.94 ± 0.91	0.7364 ± 0.0071
206 R	1315.5 ± 39.7	44.68 ± 0.96	0.7680 ± 0.0092	1927.3 ± 53.4	36.02 ± 0.83	0.8047 ± 0.0074
207 A	1322.7 ± 39.9	44.55 ± 0.76	0.7862 ± 0.0094	1908.0 ± 53.2	36.23 ± 0.83	0.8044 ± 0.0074
208 D	1181.6 ± 35.0	51.40 ± 1.18	0.7772 ± 0.0093	1901.0 ± 52.9	41.46 ± 0.95	0.7809 ± 0.0073
209 L	1318.9 ± 39.9	44.89 ± 0.88	0.7678 ± 0.0092	1978.3 ± 55.5	37.19 ± 0.86	0.7652 ± 0.0073
210 E	1287.8 ± 38.5	44.02 ± 0.79	0.7785 ± 0.0093	1886.0 ± 51.8	37.03 ± 0.85	0.8035 ± 0.0074
212 I	1335.2 ± 40.3	50.39 ± 1.15	0.7223 ± 0.0087	1901.9 ± 53.1	39.55 ± 0.90	0.7641 ± 0.0072
213 L	1244.6 ± 37.2	48.69 ± 1.07	0.7375 ± 0.0089	1754.4 ± 49.0	40.95 ± 0.95	0.7598 ± 0.0072
214 G	1113.1 ± 32.5	64.29 ± 1.72	0.4472 ± 0.0059	1415.8 ± 38.1	51.33 ± 1.14	0.5277 ± 0.0064

Table S2. ^{15}N Relaxation Data of *Escherichia coli* Adenylate Kinase in Complex with Inhibitor AP_5A Obtained at Magnetic Fields of 14.10 and 18.79 T

Residue	14.10 T			18.79 T		
	T_1 , ms	T_2 , ms	NOE	T_1 , ms	T_2 , ms	NOE
2 R	966 ± 20	64.9 ± 1.1	0.7865 ± 0.0072	1510.5 ± 33.7	55.73 ± 0.59	0.8128 ± 0.0122
3 I	910 ± 19	66.3 ± 1.1	0.7975 ± 0.0073	1409.5 ± 31.0	59.49 ± 0.59	0.8142 ± 0.0122
4 I	921 ± 18	67.9 ± 1.1	0.8096 ± 0.0074	1406.3 ± 30.5	56.44 ± 0.59	0.8468 ± 0.0127
5 L	872 ± 18	63.7 ± 1.1	0.8063 ± 0.0137	1412.8 ± 31.1	49.96 ± 0.62	0.8036 ± 0.0121
6 L	890 ± 18	66.8 ± 1.1	0.8110 ± 0.0075	1374.6 ± 29.5	52.04 ± 0.60	0.8268 ± 0.0124
7 G	874 ± 18	69.4 ± 1.2	0.7531 ± 0.0069	1330.8 ± 28.2	59.09 ± 0.59	0.7755 ± 0.0116
8 A	874 ± 18	58.3 ± 1.0	0.8216 ± 0.0086	1305.7 ± 27.5	43.30 ± 0.62	0.8442 ± 0.0127
10 G	885 ± 18	48.5 ± 0.9	0.8257 ± 0.0227	1352.7 ± 29.6	49.93 ± 0.61	0.8095 ± 0.0121
11 A	857 ± 18	55.5 ± 0.9	0.7973 ± 0.0086	1265.2 ± 26.7	49.88 ± 0.61	0.8674 ± 0.0130
12 G	844 ± 17	62.2 ± 1.0	0.8350 ± 0.0149	-	-	0.6854 ± 0.0103
13 K	838 ± 18	67.8 ± 1.1	0.7293 ± 0.0067	1231.4 ± 25.3	57.70 ± 0.59	0.7496 ± 0.0112
14 G	-	-	-	-	-	0.7863 ± 0.0118
15 T	900 ± 19	61.2 ± 1.0	0.8098 ± 0.0075	1393.7 ± 30.2	52.28 ± 0.60	0.8416 ± 0.0126
16 Q	852 ± 18	63.9 ± 1.0	0.8327 ± 0.0121	1341.7 ± 28.5	52.60 ± 0.62	0.8242 ± 0.0124
17 A	843 ± 18	62.8 ± 1.1	0.8281 ± 0.0076	1277.9 ± 26.9	52.52 ± 0.59	0.8691 ± 0.0130
18 Q	871 ± 18	67.7 ± 1.1	0.7922 ± 0.0073	1311.8 ± 27.8	57.06 ± 0.59	0.8389 ± 0.0126
19 F	864 ± 18	64.5 ± 1.1	0.7926 ± 0.0073	1306.8 ± 27.5	53.83 ± 0.60	0.8181 ± 0.0123
20 I	-	-	-	1364.1 ± 29.4	57.33 ± 0.59	0.7387 ± 0.0111
21 M	858 ± 18	62.8 ± 1.0	0.8032 ± 0.0105	1314.2 ± 27.8	52.51 ± 0.60	0.8320 ± 0.0125
22 E	871 ± 18	67.7 ± 1.1	0.7931 ± 0.0109	1316.2 ± 27.8	55.85 ± 0.59	0.8220 ± 0.0123
23 K	892 ± 19	66.3 ± 1.1	0.7837 ± 0.0072	1360.2 ± 29.1	56.85 ± 0.59	0.8031 ± 0.0120
24 Y	894 ± 19	66.7 ± 1.1	0.7957 ± 0.0073	1380.0 ± 29.8	59.44 ± 0.58	0.8333 ± 0.0125
25 G	912 ± 19	66.3 ± 1.1	0.7963 ± 0.0073	1366.8 ± 29.4	53.49 ± 0.60	0.8265 ± 0.0124
26 I	884 ± 19	64.2 ± 1.1	0.8060 ± 0.0074	1354.4 ± 28.9	56.28 ± 0.59	0.8219 ± 0.0123
28 Q	903 ± 19	69.4 ± 1.2	0.7672 ± 0.0068	1369.1 ± 29.3	60.29 ± 0.59	0.8126 ± 0.0122
29 I	893 ± 19	49.0 ± 0.9	0.7987 ± 0.0073	1378.1 ± 29.9	35.01 ± 0.54	0.8854 ± 0.0133
30 S	915 ± 18	66.6 ± 1.1	0.8011 ± 0.0074	1373.4 ± 29.6	-	0.8273 ± 0.0124
31 T	850 ± 18	63.5 ± 1.0	0.8290 ± 0.0076	1244.0 ± 26.0	49.92 ± 0.61	0.8557 ± 0.0128
32 G	-	48.4 ± 0.9	0.8353 ± 0.0247	-	-	-
33 D	977 ± 20	75.0 ± 1.3	0.6139 ± 0.0176	1423.4 ± 31.0	67.39 ± 0.80	0.7233 ± 0.0108
34 M	867 ± 18	59.7 ± 1.0	0.8228 ± 0.0081	1311.5 ± 27.7	49.36 ± 0.61	0.8611 ± 0.0129
35 L	877 ± 18	65.0 ± 1.1	0.8201 ± 0.0096	1336.5 ± 28.3	55.66 ± 0.59	0.8481 ± 0.0127
36 R	879 ± 18	63.8 ± 1.1	0.8114 ± 0.0075	1358.6 ± 29.0	52.12 ± 0.60	0.8369 ± 0.0126
37 A	884 ± 19	64.2 ± 1.1	0.8060 ± 0.0074	1354.4 ± 28.9	56.28 ± 0.59	0.8219 ± 0.0123
38 A	914 ± 19	69.5 ± 1.2	0.7736 ± 0.0071	1402.1 ± 30.4	60.47 ± 0.60	0.7750 ± 0.0116
39 V	883 ± 19	69.9 ± 1.2	0.7029 ± 0.0160	1344.4 ± 28.6	53.10 ± 0.60	0.8133 ± 0.0122
40 K	905 ± 19	66.3 ± 1.1	0.7850 ± 0.0072	1356.1 ± 29.1	54.78 ± 0.59	0.7981 ± 0.0120
41 S	906 ± 19	70.7 ± 1.2	0.7470 ± 0.0069	1347.6 ± 28.8	59.90 ± 0.59	0.7765 ± 0.0116

Residue	14.10 T			18.79 T		
	T_1 , ms	T_2 , ms	NOE	T_1 , ms	T_2 , ms	NOE
42 G	836 ± 18	70.4 ± 1.2	0.7636 ± 0.0070	1223.3 ± 25.4	58.23 ± 0.58	0.7778 ± 0.0117
43 S	873 ± 19	72.4 ± 1.2	0.6701 ± 0.0062	1250.9 ± 25.9	60.38 ± 0.61	0.7064 ± 0.0106
44 E	896 ± 19	65.6 ± 1.1	0.7596 ± 0.0093	1278.1 ± 27.5	57.37 ± 0.58	0.7652 ± 0.0115
45 L	864 ± 19	69.9 ± 1.2	0.6983 ± 0.0064	1216.2 ± 25.3	60.67 ± 0.61	0.7181 ± 0.0108
46 G	846 ± 18	70.2 ± 1.2	0.7550 ± 0.0069	1275.6 ± 26.6	58.74 ± 0.58	0.7730 ± 0.0116
48 Q	866 ± 19	71.6 ± 1.2	0.6717 ± 0.0087	1266.3 ± 26.3	59.86 ± 0.59	0.6888 ± 0.0103
49 A	883 ± 19	69.9 ± 1.2	0.7558 ± 0.0090	1319.3 ± 27.9	61.50 ± 0.63	0.7102 ± 0.0107
50 K	885 ± 18	68.0 ± 1.1	0.7883 ± 0.0073	1342.2 ± 28.6	55.25 ± 0.59	0.8143 ± 0.0122
51 D	881 ± 19	68.9 ± 1.2	0.7251 ± 0.0067	1288.3 ± 27.2	56.11 ± 0.59	0.7489 ± 0.0112
52 I	895 ± 18	70.7 ± 1.2	0.7424 ± 0.0070	1339.0 ± 28.5	59.50 ± 0.59	0.7565 ± 0.0113
53 M	853 ± 19	64.2 ± 1.1	0.7965 ± 0.0073	1307.2 ± 27.7	54.28 ± 0.60	0.8342 ± 0.0125
54 D	864 ± 18	63.5 ± 1.1	0.7980 ± 0.0087	1304.6 ± 27.4	51.63 ± 0.60	0.8255 ± 0.0124
55 A	901 ± 18	66.9 ± 1.1	0.7835 ± 0.0072	1341.7 ± 28.5	54.12 ± 0.60	0.7935 ± 0.0119
56 G	853 ± 18	68.0 ± 1.1	0.7948 ± 0.0073	1316.4 ± 27.8	53.10 ± 0.60	0.8196 ± 0.0123
57 K	886 ± 18	62.0 ± 1.0	0.7965 ± 0.0073	1305.1 ± 27.7	49.05 ± 0.62	0.8057 ± 0.0190
58 L	890 ± 18	69.8 ± 1.2	0.6962 ± 0.0083	1314.4 ± 27.9	59.51 ± 0.58	0.7264 ± 0.0109
59 V	882 ± 18	66.5 ± 1.1	0.7894 ± 0.0105	1365.9 ± 29.4	59.22 ± 0.59	0.8175 ± 0.0123
60 T	902 ± 18	67.1 ± 1.1	0.7306 ± 0.0143	1342.2 ± 28.8	53.61 ± 0.59	0.7862 ± 0.0204
61 D	860 ± 18	65.0 ± 1.1	0.7964 ± 0.0082	1412.5 ± 30.8	-	0.8156 ± 0.0122
62 E	866 ± 18	66.3 ± 1.1	0.7822 ± 0.0072	1283.2 ± 26.9	54.76 ± 0.59	0.8309 ± 0.0125
63 L	860 ± 18	62.7 ± 1.0	0.7935 ± 0.0081	1321.4 ± 27.8	42.42 ± 0.62	0.8375 ± 0.0157
64 V	877 ± 18	64.7 ± 1.0	0.7215 ± 0.0186	1331.8 ± 28.4	46.72 ± 0.61	0.8303 ± 0.0225
65 I	847 ± 17	62.1 ± 1.0	0.8232 ± 0.0076	1318.2 ± 28.1	51.98 ± 0.60	0.8396 ± 0.0150
66 A	857 ± 18	63.8 ± 1.1	0.8133 ± 0.0106	1273.8 ± 26.5	48.99 ± 0.61	0.8572 ± 0.0129
67 L	877 ± 18	66.8 ± 1.1	0.8016 ± 0.0105	1317.0 ± 27.8	54.32 ± 0.59	0.8186 ± 0.0123
68 V	856 ± 18	65.0 ± 1.1	0.8178 ± 0.0079	1296.5 ± 27.1	50.26 ± 0.61	0.8105 ± 0.0122
69 K	851 ± 18	63.5 ± 1.1	0.8243 ± 0.0076	1307.2 ± 27.5	55.41 ± 0.59	0.8583 ± 0.0129
70 E	881 ± 18	65.7 ± 1.1	0.8087 ± 0.0074	1343.1 ± 28.6	55.62 ± 0.59	0.8213 ± 0.0123
71 R	870 ± 18	65.7 ± 1.1	0.8065 ± 0.0074	1351.1 ± 29.1	55.22 ± 0.60	0.8277 ± 0.0124
72 I	849 ± 18	56.7 ± 0.9	0.8191 ± 0.0090	1307.5 ± 27.5	45.81 ± 0.61	0.8511 ± 0.0128
73 A	864 ± 18	60.5 ± 1.0	0.8164 ± 0.0091	1298.4 ± 27.1	51.29 ± 0.60	0.8411 ± 0.0126
74 Q	927 ± 19	70.5 ± 1.2	0.7919 ± 0.0073	1412.9 ± 30.8	59.34 ± 0.59	0.8026 ± 0.0120
75 E	896 ± 19	65.6 ± 1.1	0.7596 ± 0.0093	1278.1 ± 27.5	60.38 ± 0.61	0.7652 ± 0.0115
76 D	879 ± 18	63.2 ± 1.0	0.7910 ± 0.0073	1311.4 ± 27.6	51.96 ± 0.61	0.8158 ± 0.0122
77 C	902 ± 19	60.8 ± 1.0	0.8081 ± 0.0074	1397.2 ± 30.3	50.78 ± 0.61	0.8256 ± 0.0124
78 R	887 ± 19	65.4 ± 1.1	0.7910 ± 0.0073	1339.3 ± 28.5	54.73 ± 0.60	0.8090 ± 0.0121
79 N	948 ± 20	69.4 ± 1.2	0.7336 ± 0.0067	1361.6 ± 29.8	61.10 ± 0.62	0.7542 ± 0.0113
80 G	940 ± 19	75.0 ± 1.3	0.7289 ± 0.0067	1416.4 ± 30.8	62.58 ± 0.65	0.7431 ± 0.0111
81 F	910 ± 19	67.5 ± 1.1	0.8170 ± 0.0075	1413.7 ± 30.7	56.66 ± 0.59	0.8288 ± 0.0124
82 L	-	65.0 ± 1.1	0.8072 ± 0.0074	1373.4 ± 29.6	55.13 ± 0.59	0.8447 ± 0.0127
83 L	911 ± 19	63.0 ± 1.1	0.8139 ± 0.0075	1429.2 ± 31.2	54.72 ± 0.59	0.8489 ± 0.0127

Residue	14.10 T			18.79 T		
	T_1 , ms	T_2 , ms	NOE	T_1 , ms	T_2 , ms	NOE
84 D	913 ± 18	46.8 ± 0.9	0.8110 ± 0.0128	1396.2 ± 30.1	38.56 ± 0.60	0.8228 ± 0.0224
85 G	887 ± 18	57.7 ± 0.9	0.7598 ± 0.0112	-	-	-
86 F	846 ± 17	62.9 ± 1.0	0.8377 ± 0.0080	1289.6 ± 26.9	50.97 ± 0.60	0.8531 ± 0.0128
88 R	926 ± 19	61.1 ± 1.0	0.7875 ± 0.0105	1275.1 ± 26.4	54.49 ± 0.60	0.8145 ± 0.0122
89 T	865 ± 18	66.5 ± 1.1	0.8324 ± 0.0078	1356.2 ± 29.0	55.55 ± 0.59	0.8408 ± 0.0126
90 I	881 ± 19	65.8 ± 1.1	0.8176 ± 0.0075	1334.6 ± 28.3	55.46 ± 0.59	0.8563 ± 0.0128
92 Q	889 ± 18	65.0 ± 1.1	0.8288 ± 0.0077	1363.8 ± 29.3	54.92 ± 0.60	0.8500 ± 0.0127
93 A	857 ± 19	65.2 ± 1.1	0.8369 ± 0.0077	1321.2 ± 28.0	57.72 ± 0.58	0.8553 ± 0.0128
94 D	870 ± 18	62.9 ± 1.1	0.8263 ± 0.0076	1332.6 ± 28.3	53.17 ± 0.60	0.8609 ± 0.0129
95 A	886 ± 18	63.1 ± 1.1	0.8189 ± 0.0075	1342.4 ± 28.6	53.13 ± 0.60	0.8548 ± 0.0128
96 M	873 ± 19	65.0 ± 1.1	0.8117 ± 0.0075	1313.3 ± 27.5	52.27 ± 0.60	0.8154 ± 0.0122
97 K	885 ± 19	64.2 ± 1.0	0.7942 ± 0.0073	1382.8 ± 29.8	-	0.8171 ± 0.0123
98 E	919 ± 19	62.1 ± 1.0	0.8016 ± 0.0111	1427.5 ± 31.4	53.85 ± 0.60	0.8451 ± 0.0127
99 A	926 ± 19	67.0 ± 1.1	0.7690 ± 0.0071	1398.2 ± 30.3	57.26 ± 0.59	0.7901 ± 0.0119
100 G	876 ± 18	71.3 ± 1.2	0.7952 ± 0.0073	1327.5 ± 28.2	57.39 ± 0.59	0.8125 ± 0.0122
101 I	903 ± 19	69.4 ± 1.2	0.7877 ± 0.0072	1369.1 ± 29.3	60.29 ± 0.59	0.8126 ± 0.0122
102 N	927 ± 19	83.6 ± 1.5	0.6498 ± 0.0060	1354.4 ± 29.0	71.82 ± 0.98	0.6843 ± 0.0103
103 V	949 ± 19	77.9 ± 1.4	0.6284 ± 0.0058	1385.6 ± 30.1	66.86 ± 0.80	0.6439 ± 0.0097
104 D	905 ± 18	61.4 ± 1.0	0.8075 ± 0.0160	1401.8 ± 30.4	47.85 ± 0.60	0.8067 ± 0.0133
105 Y	906 ± 19	65.7 ± 1.1	0.8034 ± 0.0074	1426.8 ± 31.2	57.50 ± 0.59	0.8319 ± 0.0125
106 V	952 ± 19	69.5 ± 1.1	0.8034 ± 0.0087	1486.7 ± 33.2	62.12 ± 0.64	0.8244 ± 0.0124
107 L	900 ± 18	67.8 ± 1.1	0.8130 ± 0.0075	1418.1 ± 31.0	58.99 ± 0.58	0.8386 ± 0.0126
108 E	920 ± 18	66.7 ± 1.1	0.8176 ± 0.0075	1429.9 ± 31.5	59.34 ± 0.58	0.8425 ± 0.0126
109 F	906 ± 18	68.1 ± 1.1	0.8091 ± 0.0074	1433.3 ± 32.0	54.18 ± 0.60	0.8310 ± 0.0125
110 D	940 ± 19	69.3 ± 1.2	0.7957 ± 0.0073	1412.5 ± 30.8	58.14 ± 0.58	0.8156 ± 0.0122
111 V	947 ± 20	66.6 ± 1.1	0.7651 ± 0.0070	1461.5 ± 32.2	56.92 ± 0.59	0.7938 ± 0.0119
113 D	919 ± 18	63.8 ± 1.1	0.8178 ± 0.0169	1408.5 ± 30.5	55.13 ± 0.59	0.8447 ± 0.0127
114 E	884 ± 19	64.2 ± 1.1	0.7956 ± 0.0073	1353.8 ± 29.0	54.25 ± 0.60	0.8195 ± 0.0123
115 L	904 ± 18	63.0 ± 1.0	0.7930 ± 0.0077	1324.7 ± 28.2	52.18 ± 0.60	0.7874 ± 0.0160
116 I	881 ± 18	62.9 ± 1.0	0.7903 ± 0.0157	1363.6 ± 29.4	52.13 ± 0.60	0.8122 ± 0.0122
117 V	864 ± 18	62.3 ± 1.0	0.7900 ± 0.0081	1337.5 ± 28.4	51.86 ± 0.60	0.8369 ± 0.0126
118 D	874 ± 18	69.0 ± 1.2	0.7615 ± 0.0071	1329.5 ± 28.2	58.31 ± 0.59	0.7988 ± 0.0139
119 R	885 ± 18	59.4 ± 1.0	0.7881 ± 0.0073	1364.1 ± 30.0	48.86 ± 0.61	0.8127 ± 0.0214
120 I	890 ± 19	-	0.7950 ± 0.0137	1208.8 ± 24.7	59.51 ± 0.59	0.8321 ± 0.0125
121 V	839 ± 18	57.6 ± 0.9	0.8144 ± 0.0075	1343.4 ± 28.7	43.79 ± 0.63	0.7745 ± 0.0116
122 G	883 ± 18	57.0 ± 0.9	0.8232 ± 0.0101	1323.1 ± 27.9	44.54 ± 0.62	0.8292 ± 0.0124
123 R	838 ± 19	59.7 ± 0.9	0.8147 ± 0.0075	1247.8 ± 25.7	46.00 ± 0.61	0.8674 ± 0.0140
124 R	873 ± 19	58.1 ± 0.9	0.8094 ± 0.0107	1381.6 ± 29.5	41.55 ± 0.63	0.7765 ± 0.0116
125 V	866 ± 18	66.3 ± 1.1	0.7822 ± 0.0072	1305.3 ± 27.6	53.47 ± 0.60	0.8132 ± 0.0122
126 H	904 ± 19	65.5 ± 1.1	0.7824 ± 0.0072	1378.7 ± 29.7	55.56 ± 0.59	0.7948 ± 0.0119
127 A	931 ± 20	66.3 ± 1.1	0.7472 ± 0.0069	1419.8 ± 31.2	56.52 ± 0.60	0.7762 ± 0.0116

Residue	14.10 T			18.79 T		
	T_1 , ms	T_2 , ms	NOE	T_1 , ms	T_2 , ms	NOE
129 S	922 ± 19	68.1 ± 1.1	0.7765 ± 0.0098	1395.6 ± 30.2	57.37 ± 0.59	0.8049 ± 0.0121
130 G	890 ± 18	65.5 ± 1.1	0.7720 ± 0.0071	1335.6 ± 28.3	55.60 ± 0.59	0.8029 ± 0.0120
131 R	862 ± 18	64.9 ± 1.1	0.8005 ± 0.0086	1298.0 ± 27.3	54.31 ± 0.60	0.8280 ± 0.0124
132 V	915 ± 19	64.5 ± 1.0	0.7669 ± 0.0078	1304.1 ± 27.6	51.63 ± 0.60	0.7578 ± 0.0114
133 Y	900 ± 19	64.9 ± 1.1	0.7596 ± 0.0070	1386.3 ± 30.1	52.20 ± 0.60	0.7915 ± 0.0119
134 H	872 ± 18	67.0 ± 1.1	0.8054 ± 0.0117	1396.6 ± 30.2	56.12 ± 0.59	0.8400 ± 0.0126
135 V	879 ± 18	64.5 ± 1.0	0.7984 ± 0.0073	1358.4 ± 29.6	53.27 ± 0.61	0.8315 ± 0.0125
136 K	893 ± 18	64.3 ± 1.1	0.7876 ± 0.0072	1353.4 ± 29.0	56.29 ± 0.59	0.8147 ± 0.0122
137 F	944 ± 20	69.1 ± 1.2	0.7760 ± 0.0187	1433.0 ± 32.7	-	0.7941 ± 0.0134
138 N	919 ± 19	70.3 ± 1.2	0.7770 ± 0.0071	1309.6 ± 28.0	59.77 ± 0.59	0.7047 ± 0.0276
141 K	908 ± 19	70.8 ± 1.2	0.7848 ± 0.0072	1377.5 ± 29.7	60.21 ± 0.59	0.8017 ± 0.0120
142 V	927 ± 19	68.1 ± 1.2	0.7689 ± 0.0071	1423.8 ± 31.2	59.01 ± 0.59	0.7883 ± 0.0118
143 E	952 ± 20	71.5 ± 1.2	0.7555 ± 0.0077	1452.5 ± 32.0	62.53 ± 0.65	0.7786 ± 0.0117
144 G	925 ± 19	68.3 ± 1.2	0.7753 ± 0.0074	1415.7 ± 30.9	61.04 ± 0.61	0.7919 ± 0.0119
145 K	856 ± 18	66.2 ± 1.1	0.7866 ± 0.0072	1275.1 ± 26.4	54.49 ± 0.60	0.8145 ± 0.0122
146 D	891 ± 19	65.7 ± 1.1	0.7946 ± 0.0073	1374.2 ± 29.7	57.53 ± 0.59	0.8178 ± 0.0123
147 D	893 ± 19	67.2 ± 1.1	0.8031 ± 0.0074	1371.5 ± 29.5	55.85 ± 0.59	0.8296 ± 0.0124
148 V	917 ± 19	70.4 ± 1.2	0.7817 ± 0.0072	1375.0 ± 29.6	58.49 ± 0.58	0.8011 ± 0.0120
149 T	909 ± 19	68.5 ± 1.1	0.7997 ± 0.0074	1410.6 ± 30.7	58.77 ± 0.58	0.8157 ± 0.0122
150 G	868 ± 18	64.8 ± 1.1	0.7979 ± 0.0073	1307.8 ± 27.5	53.59 ± 0.60	0.8250 ± 0.0124
151 E	884 ± 19	63.4 ± 1.0	0.7916 ± 0.0073	1328.6 ± 28.3	53.65 ± 0.60	0.8186 ± 0.0123
152 E	925 ± 18	73.1 ± 1.2	0.7348 ± 0.0068	1402.5 ± 30.5	62.36 ± 0.65	0.7536 ± 0.0113
153 L	884 ± 18	65.5 ± 1.1	0.7428 ± 0.0085	1364.1 ± 29.4	57.33 ± 0.59	0.7387 ± 0.0111
154 T	912 ± 19	68.9 ± 1.1	0.7775 ± 0.0072	1365.9 ± 29.3	58.79 ± 0.58	0.7978 ± 0.0120
155 T	908 ± 19	59.3 ± 1.0	0.7581 ± 0.0084	1365.5 ± 29.6	43.00 ± 0.61	0.7855 ± 0.0118
156 R	842 ± 18	67.0 ± 1.1	0.7737 ± 0.0133	1226.2 ± 25.6	47.69 ± 0.60	0.7722 ± 0.0132
157 K	-	-	-	1408.5 ± 30.5	51.38 ± 0.60	0.8065 ± 0.0121
158 D	818 ± 17	66.3 ± 1.1	0.7311 ± 0.0067	1246.3 ± 25.8	51.86 ± 0.58	0.8067 ± 0.0121
159 D	884 ± 18	-	0.7806 ± 0.0134	1389.7 ± 31.0	-	0.8408 ± 0.0131
160 Q	947 ± 19	84.4 ± 1.5	0.5944 ± 0.0057	1369.8 ± 29.4	67.80 ± 0.84	0.6071 ± 0.0091
161 E	939 ± 20	63.9 ± 1.1	0.7814 ± 0.0072	1366.4 ± 30.0	55.23 ± 0.59	0.8021 ± 0.0120
162 E	890 ± 19	64.4 ± 1.1	0.7546 ± 0.0069	1333.0 ± 28.3	55.21 ± 0.59	0.7772 ± 0.0117
163 T	941 ± 19	65.3 ± 1.1	0.7822 ± 0.0072	1394.4 ± 30.2	54.39 ± 0.60	0.8006 ± 0.0120
164 V	904 ± 19	60.7 ± 1.0	0.8176 ± 0.0090	1371.5 ± 29.7	50.88 ± 0.60	0.8415 ± 0.0126
165 R	904 ± 19	58.8 ± 1.0	0.8170 ± 0.0083	1392.1 ± 29.9	48.82 ± 0.62	0.8469 ± 0.0182
166 K	925 ± 19	59.8 ± 1.0	0.8165 ± 0.0075	1427.5 ± 31.4	-	0.8451 ± 0.0127
167 I	912 ± 19	60.0 ± 1.0	0.8218 ± 0.0099	1314.2 ± 27.8	-	0.8320 ± 0.0125
168 L	915 ± 19	67.1 ± 1.1	0.7996 ± 0.0099	1401.8 ± 30.4	54.92 ± 0.59	0.8020 ± 0.0120
169 V	900 ± 19	61.2 ± 1.0	0.8078 ± 0.0074	1393.7 ± 30.2	52.28 ± 0.60	0.8416 ± 0.0126
170 E	915 ± 19	64.5 ± 1.0	0.7669 ± 0.0078	1304.1 ± 27.6	51.63 ± 0.60	0.8312 ± 0.0125
171 Y	905 ± 19	60.3 ± 1.0	0.8352 ± 0.0143	1376.2 ± 29.8	48.21 ± 0.61	0.8611 ± 0.0129

Residue	14.10 T			18.79 T		
	T_1 , ms	T_2 , ms	NOE	T_1 , ms	T_2 , ms	NOE
172 H	903 ± 19	58.7 ± 1.0	0.8325 ± 0.0077	1391.9 ± 30.2	47.95 ± 0.62	0.8684 ± 0.0130
173 Q	941 ± 19	63.0 ± 1.0	0.8202 ± 0.0075	1449.8 ± 31.8	50.62 ± 0.60	0.8418 ± 0.0126
174 M	958 ± 19	64.5 ± 1.1	0.8092 ± 0.0074	1458.7 ± 32.1	51.40 ± 0.60	0.8340 ± 0.0125
175 T	931 ± 19	64.5 ± 1.0	0.8238 ± 0.0076	1455.5 ± 32.2	48.23 ± 0.61	0.8499 ± 0.0127
176 A	873 ± 18	61.5 ± 1.0	0.8205 ± 0.0082	1300.6 ± 27.2	49.70 ± 0.61	0.8628 ± 0.0197
178 L	903 ± 18	60.6 ± 1.0	0.8233 ± 0.0090	1403.6 ± 31.1	49.88 ± 0.60	0.8535 ± 0.0128
179 I	891 ± 19	62.5 ± 1.0	0.8264 ± 0.0076	1326.2 ± 28.0	53.47 ± 0.60	0.8552 ± 0.0128
180 G	921 ± 20	68.4 ± 1.1	0.8298 ± 0.0076	1397.9 ± 30.4	53.29 ± 0.60	0.8513 ± 0.0128
181 Y	903 ± 20	61.2 ± 1.0	0.8320 ± 0.0077	1380.0 ± 29.8	52.59 ± 0.60	0.8321 ± 0.0125
182 Y	900 ± 19	59.5 ± 1.0	0.8391 ± 0.0080	1387.2 ± 29.9	50.65 ± 0.61	0.8640 ± 0.0130
183 S	867 ± 18	59.7 ± 1.0	0.8228 ± 0.0081	1311.5 ± 27.7	49.36 ± 0.61	0.8611 ± 0.0129
184 K	876 ± 19	63.9 ± 1.1	0.8158 ± 0.0075	1348.7 ± 28.9	54.52 ± 0.59	0.8667 ± 0.0130
185 E	899 ± 18	64.8 ± 1.1	0.7869 ± 0.0083	1358.9 ± 29.1	55.39 ± 0.59	0.8075 ± 0.0121
186 A	880 ± 19	61.8 ± 1.0	0.8100 ± 0.0080	1342.7 ± 28.6	54.11 ± 0.60	0.8424 ± 0.0126
187 E	884 ± 19	64.2 ± 1.1	0.8060 ± 0.0074	1354.4 ± 28.9	56.28 ± 0.59	0.8219 ± 0.0123
188 A	930 ± 20	64.7 ± 1.1	0.7869 ± 0.0072	1428.2 ± 31.3	55.26 ± 0.60	0.8197 ± 0.0123
189 G	914 ± 19	69.8 ± 1.1	0.7967 ± 0.0073	1391.5 ± 30.2	58.96 ± 0.59	0.8181 ± 0.0123
190 N	817 ± 18	68.9 ± 1.2	0.8135 ± 0.0087	1208.8 ± 24.7	59.51 ± 0.59	0.8321 ± 0.0125
191 T	874 ± 19	70.8 ± 1.2	0.7715 ± 0.0071	1329.2 ± 28.2	61.06 ± 0.62	0.7824 ± 0.0117
192 K	914 ± 19	69.5 ± 1.2	0.7736 ± 0.0071	1402.1 ± 30.4	60.47 ± 0.60	0.7750 ± 0.0116
193 Y	946 ± 19	71.7 ± 1.2	0.7570 ± 0.0070	1446.8 ± 31.8	60.00 ± 0.59	0.7679 ± 0.0115
194 A	902 ± 18	66.5 ± 1.1	0.8233 ± 0.0076	1386.6 ± 29.8	54.81 ± 0.60	0.8440 ± 0.0127
195 K	990 ± 21	72.0 ± 1.2	0.7731 ± 0.0071	1522.5 ± 34.4	63.08 ± 0.67	0.7994 ± 0.0120
196 V	900 ± 19	64.9 ± 1.1	0.7596 ± 0.0070	1386.3 ± 30.1	52.20 ± 0.60	0.7915 ± 0.0119
197 D	922 ± 19	69.9 ± 1.2	0.7856 ± 0.0072	1420.6 ± 31.1	60.68 ± 0.60	0.8237 ± 0.0124
198 G	938 ± 20	68.8 ± 1.2	0.8042 ± 0.0074	1444.5 ± 32.0	59.86 ± 0.59	0.8259 ± 0.0124
199 T	870 ± 18	59.4 ± 1.0	0.8285 ± 0.0085	1305.9 ± 27.6	49.22 ± 0.61	0.8448 ± 0.0127
200 K	916 ± 19	62.7 ± 1.0	0.8018 ± 0.0078	1371.2 ± 29.4	51.95 ± 0.60	0.8319 ± 0.0125
202 V	921 ± 19	64.1 ± 1.1	0.8189 ± 0.0092	1417.9 ± 31.0	55.43 ± 0.59	0.8125 ± 0.0122
203 A	895 ± 18	59.9 ± 1.0	0.8222 ± 0.0076	1352.0 ± 29.0	50.76 ± 0.61	0.8514 ± 0.0128
204 E	899 ± 19	64.5 ± 1.1	0.7939 ± 0.0073	1398.2 ± 30.3	55.73 ± 0.59	0.8092 ± 0.0121
205 V	916 ± 19	62.8 ± 1.0	0.8189 ± 0.0075	1411.1 ± 30.7	52.45 ± 0.60	0.8397 ± 0.0126
206 R	923 ± 19	60.9 ± 1.0	0.8215 ± 0.0076	1403.6 ± 30.6	51.63 ± 0.60	0.8575 ± 0.0129
207 A	912 ± 19	61.6 ± 1.0	0.8182 ± 0.0075	1373.3 ± 29.6	51.68 ± 0.61	0.8438 ± 0.0127
208 D	925 ± 19	63.1 ± 1.0	0.8018 ± 0.0094	1414.8 ± 30.8	53.47 ± 0.60	0.8330 ± 0.0125
209 L	926 ± 20	60.5 ± 1.0	0.7965 ± 0.0073	1419.4 ± 31.0	52.48 ± 0.60	0.8452 ± 0.0127
210 E	947 ± 20	61.9 ± 1.0	0.8312 ± 0.0087	1414.5 ± 30.6	52.63 ± 0.59	0.8376 ± 0.0302
211 K	911 ± 19	63.6 ± 1.0	0.7897 ± 0.0073	1387.8 ± 29.9	54.63 ± 0.59	0.8192 ± 0.0123
212 I	994 ± 20	66.1 ± 1.1	0.7657 ± 0.0070	1476.0 ± 32.9	55.90 ± 0.59	0.7899 ± 0.0118
213 L	912 ± 18	65.2 ± 1.1	0.7833 ± 0.0081	1412.2 ± 30.8	55.35 ± 0.59	0.8109 ± 0.0122
214 G	834 ± 18	82.3 ± 1.5	0.5731 ± 0.0053	1146.2 ± 22.9	71.88 ± 0.99	0.6308 ± 0.0095

Table S3. The Results of SRLS Fitting of Combined *E. coli* Adenylate Kinase ^{15}N Relaxation Data Obtained at 14.10 and 18.79 T

Res. Model	c_{20}, kBT	$f = \tau/\tau_m$ (or $\tau_{\perp}/\tau_m$)	$\beta, \text{deg.}$	S^2	S_f^2	$\tau_{\parallel}, \text{ps}$	$\tau_{\perp}, \text{ns}$	$R_{\text{ex}}, 1/\text{s}$
2	4	11.547 0.908	0.0032 0.0006	0.829 0.013	1.000 0.000	47.6 9.3		1.85 0.33
3	1	15.516 1.477		0.872 0.012	1.000 0.000			
4	4	10.333 0.457	0.0075 0.0008	0.809 0.008	1.000 0.000	112.5 12.2		1.70 0.32
5	4	15.253 5.746	0.0039 0.0012	0.870 0.023	1.000 0.000	59.0 18.3		2.21 0.44
6	4	14.955 1.574	0.0060 0.0010	0.868 0.012	1.000 0.000	91.0 14.9		0.88 0.37
7	4	10.363 0.490	0.0058 0.0007	0.809 0.009	1.000 0.000	87.0 10.4		1.81 0.30
8	4	12.106 0.601	0.0075 0.0009	0.837 0.008	1.000 0.000	112.6 13.5		1.18 0.32
11	4	12.172 0.730	0.0060 0.0008	0.838 0.009	1.000 0.000	90.1 12.0		3.47 0.35
15	8	1.027 1.010	0.7313 0.1024	0.039 0.095	0.762 0.069	14.8 7.4	11.04 1.55	7.07 1.38
16	8	2.948 0.782	0.5166 0.0921	0.244 0.082	0.682 0.057	3.2 4.0	7.80 1.39	7.11 1.44
18	4	12.333 0.898	0.0046 0.0007	0.840 0.011	1.000 0.000	68.8 10.9		2.28 0.34
19	4	14.528 1.175	0.0065 0.0010	0.864 0.010	1.000 0.000	98.4 14.6		1.55 0.32
20	4	14.811 1.812	0.0138 0.0057	0.866 0.013	1.000 0.000	207.8 85.5		0.81 0.45
22	4	12.973 1.177	0.0042 0.0008	0.848 0.012	1.000 0.000	63.5 11.4		2.69 0.35
23	4	12.199 0.728	0.0064 0.0008	0.838 0.009	1.000 0.000	97.2 12.2		2.28 0.31
24	4	12.089 1.003	0.0038 0.0007	0.836 0.012	1.000 0.000	57.7 10.4		2.23 0.35
25	4	10.960 0.785	0.0030 0.0006	0.820 0.012	1.000 0.000	44.7 8.4		3.88 0.36
26	4	9.246 0.503	0.0030 0.0004	0.787 0.011	1.000 0.000	44.6 6.8		3.06 0.34
28	4	10.691 0.547	0.0056 0.0007	0.815 0.009	1.000 0.000	84.5 10.6		1.26 0.30
29	4	12.633 0.802	0.0060 0.0008	0.843 0.010	1.000 0.000	90.1 12.2		1.07 0.32
30	6	2.534 1.107	0.6869 0.1170	0.226 0.124	0.786 0.056	10.2 15.9	10.37 1.77	
32	8	3.008 0.946	0.6085 0.1042	0.287 0.108	0.782 0.054	4.4 8.1	9.19 1.57	2.29 1.28
33	8	3.233 0.626	0.4885 0.0780	0.287 0.069	0.713 0.048	2.9 3.5	7.38 1.18	3.27 1.21
36	8	3.000 0.980	0.6230 0.1094	0.266 0.104	0.726 0.058	3.0 5.7	9.41 1.65	2.78 1.28
37	6	3.440 0.849	0.6185 0.0987	0.354 0.105	0.817 0.036	4.8 17.5	9.34 1.49	

Res. Model	c_{20} , $k_B T$	$f = \tau/\tau_m$ (or $\tau_\perp/\tau_m$)	β , deg.	S^2	S_f^2	$\tau_\parallel$, ps	$\tau_\perp$, ns	R_{ex} , 1/s
38	6	3.665 0.827	15.5 1.5	0.370 0.095	0.797 0.032	4.5 8.7	9.20 1.40	
39	6	4.283 0.707	15.4 0.7	0.430 0.068	0.800 0.015	4.4 2.9	8.63 1.13	
40	6	4.182 0.624	14.7 0.6	0.430 0.062	0.816 0.013	5.3 2.6	8.51 1.00	
41	8	3.887 0.408	19.8 1.5	0.337 0.040	0.684 0.041	5.5 1.4	5.87 0.72	2.50 1.13
42	8	3.906 0.397	20.2 1.6	0.333 0.039	0.673 0.043	6.6 1.4	5.73 0.69	3.92 1.22
43	6	4.746 0.525	16.2 0.5	0.454 0.039	0.779 0.011	8.5 2.0	7.94 0.80	
45	6	4.210 0.600	15.8 0.6	0.419 0.057	0.790 0.014	7.7 3.4	7.63 1.02	
46	8	3.555 0.582	19.8 1.6	0.308 0.061	0.684 0.043	4.6 2.5	7.12 1.08	3.95 1.28
47	6	4.146 0.660	14.8 0.8	0.426 0.069	0.814 0.016	7.4 6.9	8.47 1.09	
48	8	2.303 1.143	18.6 2.6	0.177 0.115	0.719 0.065	6.7 6.5	10.96 1.88	3.67 1.22
49	6	3.839 0.607	15.9 0.7	0.383 0.067	0.787 0.017	9.3 5.8	8.15 1.07	
50	8	4.048 0.545	18.5 1.6	0.370 0.052	0.722 0.042	4.8 1.8	7.01 0.95	2.80 1.27
51	6	4.297 0.641	15.2 0.6	0.434 0.060	0.805 0.013	7.0 3.1	8.51 1.02	
52	8	3.494 0.556	20.1 1.5	0.299 0.058	0.677 0.042	4.6 2.4	7.05 1.05	3.19 1.16
53	8	3.879 0.505	19.2 1.5	0.345 0.049	0.702 0.041	5.2 1.6	7.08 0.91	3.41 1.29
54	6	4.666 0.558	15.4 0.5	0.460 0.045	0.800 0.012	6.6 2.0	7.92 0.85	
55	8	4.299 0.483	19.3 1.5	0.378 0.042	0.700 0.041	4.5 1.2	6.42 0.78	3.27 1.26
56	8	3.465 0.466	20.7 1.5	0.289 0.049	0.661 0.042	4.9 1.7	6.43 0.89	3.49 1.18
57	6	4.493 0.492	16.9 0.5	0.426 0.040	0.762 0.012	4.9 1.5	7.22 0.81	
60	8	3.983 0.471	20.2 1.5	0.340 0.044	0.674 0.041	5.4 1.5	6.39 0.85	2.90 1.20
61	2	14.008 0.679		0.859 0.007	1.000 0.000	182.5 23.1		
62	4	13.168 0.750		0.850 0.008	1.000 0.000	129.9 16.2		1.56 0.31
63	4	14.259 0.888		0.861 0.008	1.000 0.000	131.3 17.0		1.30 0.30
64	4	14.659 1.123		0.865 0.010	1.000 0.000	106.9 15.2		1.37 0.31
65	4	14.810 1.173		0.866 0.010	1.000 0.000	94.3 14.4		1.68 0.32
66	4	16.856 1.988		0.882 0.011	1.000 0.000	122.2 19.6		1.55 0.32
68	4	15.598 1.517		0.873 0.011	1.000 0.000	112.7 17.5		1.01 0.34
69	4	15.142 1.421		0.869 0.011	1.000 0.000	99.9 15.7		1.69 0.33
71	4	10.740 0.642		0.816 0.011	1.000 0.000	60.6 8.9		3.85 0.36
72	4	20.034 4.204		0.901 0.015	1.000 0.000	97.1 20.7		1.69 0.35

Res. Model	c_{20} , kBT	$f = \tau/\tau_m$ (or $\tau_{\perp}/\tau_m$)	β , deg.	S^2	S_f^2	$\tau_{\parallel}$, ps	$\tau_{\perp}$, ns	R_{ex} , 1/s
73	4	20.496 5.537		0.903 0.018	1.000 0.000	94.1 24.5		1.99 0.42
74	4	13.025 1.413		0.848 0.014	1.000 0.000	55.2 11.4		1.86 0.35
75	4	12.222 0.680		0.838 0.009	1.000 0.000	103.6 13.3		1.55 0.30
77	4	12.394 1.137		0.840 0.013	1.000 0.000	49.6 10.2		2.17 0.34
78	4	14.246 1.089		0.861 0.010	1.000 0.000	99.1 14.5		1.75 0.32
79	4	11.007 0.542		0.821 0.009	1.000 0.000	92.2 11.2		1.91 0.31
80	4	10.655 0.501		0.815 0.009	1.000 0.000	91.7 10.5		1.63 0.30
81	4	14.507 1.614		0.864 0.013	1.000 0.000	70.4 13.1		1.26 0.34
82	1	18.676 1.477		0.894 0.012	1.000 0.000			
83	4	15.359 5.309		0.871 0.020	1.000 0.000	69.4 18.9		1.00 0.40
84	2	16.099 1.258		0.877 0.009	1.000 0.000	122.9 18.8		
85	6	3.379 0.612	16.6 1.2	0.327 0.074	0.770 0.027	6.8 8.1	7.43 1.14	0.94 0.34
86	4	16.332 1.143		0.879 0.008	1.000 0.000	171.2 24.8		
88	2	12.141 0.484		0.837 0.007	1.000 0.000	199.1 23.0		
89	4	10.659 0.473		0.815 0.008	1.000 0.000	113.8 12.1		1.06 0.32
90	4	12.328 0.803		0.840 0.010	1.000 0.000	78.9 11.4		1.94 0.32
92	4	13.760 4.288		0.856 0.021	1.000 0.000	44.5 13.1		2.87 0.47
94	4	13.239 1.025		0.851 0.011	1.000 0.000	69.8 11.5		4.37 0.37
97	4	12.427 0.744		0.841 0.009	1.000 0.000	92.2 12.3		2.10 0.32
98	4	10.901 0.587		0.819 0.010	1.000 0.000	82.0 10.5		3.42 0.34
99	4	10.995 0.564		0.820 0.009	1.000 0.000	85.7 10.7		2.29 0.32
100	4	13.122 0.765		0.849 0.009	1.000 0.000	117.2 14.9		1.12 0.31
101	4	14.844 3.425		0.867 0.015	1.000 0.000	173.6 18.3		2.26 0.53
102	2	11.304 0.434		0.825 0.007	1.000 0.000	117.4 12.6		
103	6	4.352 0.597	19.2 0.5	0.383 0.048	0.702 0.013	5.7 1.8	7.96 0.98	
104	4	14.251 1.648		0.861 0.013	1.000 0.000	74.5 13.8		1.12 0.36
105	4	12.670 0.987		0.844 0.011	1.000 0.000	65.4 11.0		2.02 0.33
106	2	17.034 5.051		0.884 0.023	1.000 0.000	16.3 16.3		
107	4	14.523 7.044		0.864 0.028	1.000 0.000	44.3 16.9		1.41 0.51
108	4	15.148 7.878		0.869 0.031	1.000 0.000	39.2 18.0		0.98 0.48

Res. Model	$c_{20}, k_B T$	$f = \tau/\tau_m$ (or $\tau_\perp/\tau_m$)	β , deg.	S^2	S_f^2	$\tau_{ }$, ps	$\tau_\perp$, ns	R_{ex} , l/s					
109	4	15.069	8.826	0.0026	0.0012	0.869	0.034	1.000	0.000	38.8	18.8	2.04	0.56
110	4	14.218	1.532	0.0050	0.0009	0.861	0.012	1.000	0.000	75.3	13.4	1.17	0.35
111	4	10.558	0.712	0.0029	0.0005	0.813	0.012	1.000	0.000	43.8	7.9	1.87	0.33
113	4	14.522	3.198	0.0039	0.0010	0.864	0.017	1.000	0.000	59.6	14.4	1.55	0.38
114	4	13.782	3.146	0.0035	0.0009	0.856	0.017	1.000	0.000	53.3	13.3	2.41	0.38
115	4	13.169	2.093	0.0028	0.0007	0.850	0.017	1.000	0.000	41.9	11.0	4.43	0.42
116	4	13.014	2.269	0.0037	0.0008	0.848	0.015	1.000	0.000	56.5	12.2	2.43	0.37
117	4	15.572	5.867	0.0038	0.0012	0.873	0.023	1.000	0.000	56.6	18.4	2.29	0.47
120	4	11.292	0.986	0.0027	0.0006	0.825	0.014	1.000	0.000	40.2	8.9	3.65	0.38
121	4	15.027	3.835	0.0048	0.0011	0.868	0.017	1.000	0.000	73.0	6.1	5.10	0.42
122	8	3.514	1.252	0.6823	0.1423	0.346	0.135	0.780	0.071	2.4	18.5	10.30	2.15
123	8	3.521	0.816	0.5960	0.0952	0.335	0.091	0.752	0.049	3.1	4.8	9.00	1.44
124	8	3.421	0.735	0.5281	0.0930	0.300	0.078	0.696	0.047	4.4	4.4	7.97	1.40
125	8	3.726	0.535	0.4622	0.0652	0.330	0.054	0.699	0.041	4.5	2.0	6.98	0.98
126	8	3.451	0.805	0.5597	0.0952	0.304	0.084	0.700	0.048	2.7	2.9	8.45	1.44
127	8	3.968	0.489	0.4462	0.0576	0.337	0.045	0.669	0.041	5.2	1.4	6.74	0.87
129	8	3.808	0.561	0.4193	0.0701	0.318	0.054	0.658	0.047	4.4	3.9	6.33	1.06
130	8	4.091	0.530	0.4567	0.0601	0.376	0.050	0.727	0.042	4.3	1.5	6.90	0.91
132	6	4.465	0.449	0.4619	0.0500	0.406	0.036	0.730	0.011	5.5	1.3	6.98	0.75
133	6	3.834	0.720	0.5736	0.0773	0.370	0.073	0.762	0.021	5.7	6.6	8.66	1.17
134	6	3.701	0.823	0.6042	0.0909	0.356	0.088	0.760	0.028	5.8	7.2	9.12	1.37
136	8	4.528	0.624	0.5065	0.0642	0.414	0.051	0.735	0.041	4.5	1.4	7.65	0.97
137	8	3.630	0.971	0.5500	0.1129	0.311	0.092	0.676	0.046	5.6	6.1	8.30	1.71
138	6	3.989	0.722	0.5580	0.0789	0.387	0.072	0.766	0.022	5.1	7.8	8.43	1.19
141	6	3.877	1.023	0.5844	0.1093	0.372	0.102	0.757	0.032	6.9	11.2	8.82	1.65
142	6	3.681	0.991	0.6944	0.1076	0.367	0.110	0.786	0.036	4.9	9.1	10.49	1.62
143	6	4.682	0.583	0.5504	0.0577	0.418	0.043	0.725	0.011	5.9	1.5	8.31	0.87
144	6	3.724	0.903	0.6535	0.0978	0.355	0.094	0.752	0.031	5.7	7.2	9.87	1.48
145	6	3.923	0.863	0.6570	0.0934	0.405	0.096	0.815	0.027	4.8	8.3	9.92	1.41
146	6	3.634	0.892	0.6210	0.0978	0.358	0.098	0.778	0.034	6.1	11.7	9.38	1.48

Res. Model	c_{20} , $k_B T$	$f = \tau/\tau_m$ (or $\tau_{\perp}/\tau_m$)	β , deg.	S^2	S_f^2	$\tau_{\parallel}$, ps	$\tau_{\perp}$, ns	R_{ex} , l/s
147	8	3.219 1.056	0.6234 0.1177	19.4 2.3	0.279 0.105	0.696 0.058	3.7 5.6	4.43 1.37
148	8	4.243 0.716	0.5322 0.0787	19.2 1.5	0.375 0.064	0.703 0.041	3.2 1.6	2.87 1.30
149	6	3.890 1.033	0.6970 0.1103	15.7 1.6	0.390 0.111	0.792 0.034	4.8 8.9	
150	8	3.753 0.705	0.5231 0.0795	18.2 1.7	0.347 0.071	0.728 0.044	4.2 5.1	3.13 1.30
151	8	2.898 1.183	0.7468 0.1289	18.3 2.5	0.253 0.122	0.726 0.060	2.9 4.1	3.41 1.39
152	6	4.311 0.575	0.5333 0.0619	17.8 0.5	0.399 0.050	0.738 0.013	5.9 2.1	
154	6	4.297 0.536	0.5024 0.0593	17.0 0.5	0.409 0.048	0.759 0.012	6.0 2.2	
155	8	3.690 0.620	0.4774 0.0794	20.2 1.6	0.316 0.063	0.675 0.042	5.0 3.1	2.60 1.14
156	8	3.257 0.609	0.4888 0.0754	20.2 1.7	0.274 0.064	0.674 0.046	5.1 3.6	3.62 1.24
158	8	3.777 0.479	0.4313 0.0604	19.1 1.6	0.337 0.049	0.704 0.044	7.8 2.8	3.67 1.28
159	8	3.658 0.773	0.5636 0.0921	18.9 4.2	0.329 0.079	0.710 0.045	3.9 3.9	2.89 1.26
160	8	4.634 0.474	0.4082 0.0450	20.4 1.4	0.383 0.036	0.669 0.038	5.7 1.0	2.84 1.12
162	4	10.281 0.528	0.0047 0.0006		0.808 0.010	1.000 0.000	71.7 9.2	4.27 0.35
163	4	9.015 0.450	0.0034 0.0005		0.781 0.011	1.000 0.000	50.6 6.8	4.26 0.35
165	4	11.558 2.281	0.0024 0.0006		0.829 0.018	1.000 0.000	36.9 9.3	4.61 0.44
167	4	11.292 0.986	0.0027 0.0006		0.825 0.014	1.000 0.000	40.2 8.9	3.65 0.38
170	4	11.610 0.554	0.0085 0.0010		0.830 0.008	1.000 0.000	127.9 14.8	2.76 0.32
172	4	10.462 0.487	0.0067 0.0008		0.811 0.009	1.000 0.000	101.1 11.5	2.60 0.34
173	4	10.798 0.839	0.0026 0.0005		0.817 0.014	1.000 0.000	39.1 7.7	5.31 0.41
174	4	9.899 0.632	0.0025 0.0005		0.801 0.012	1.000 0.000	37.9 6.9	4.60 0.38
175	4	9.564 0.484	0.0039 0.0005		0.794 0.010	1.000 0.000	59.3 7.8	4.35 0.35
176	4	15.035 1.874	0.0049 0.0009		0.868 0.013	1.000 0.000	74.6 14.0	2.93 0.36
178	4	12.542 1.479	0.0027 0.0007		0.842 0.016	1.000 0.000	40.4 10.9	3.53 0.39
179	4	10.900 0.474	0.0103 0.0011		0.819 0.008	1.000 0.000	155.0 17.2	0.75 0.41
180	4	16.459 6.227	0.0038 0.0013		0.880 0.023	1.000 0.000	56.7 19.5	2.35 0.46
181	2	11.304 0.434	0.0078 0.0008		0.825 0.007	1.000 0.000	117.4 12.6	
182	4	14.693 5.563	0.0023 0.0001		0.865 0.026	1.000 0.000	34.4 14.9	4.11 0.56
183	4	14.975 1.292	0.0066 0.0010		0.868 0.011	1.000 0.000	100.3 15.3	2.38 0.34
185	4	11.519 0.676	0.0058 0.0007		0.828 0.010	1.000 0.000	86.9 11.3	2.79 0.35
186	4	12.114 0.720	0.0067 0.0008		0.837 0.009	1.000 0.000	100.8 12.8	2.33 0.35

Res. Model	c_{20} , $k_B T$	$f = \tau/\tau_m$ (or $\tau_{\perp}/\tau_m$)	β , deg.	S^2	S_f^2	$\tau_{\parallel}$, ps	$\tau_{\perp}$, ns	R_{ex} , l/s
187 4	14.302 1.006	0.0075 0.0010		0.862 0.009	1.000 0.000	113.4 15.7		1.09 0.33
188 4	15.088 1.525	0.0062 0.0010		0.869 0.011	1.000 0.000	93.6 15.0		1.26 0.32
189 4	10.385 0.535	0.0048 0.0006		0.810 0.010	1.000 0.000	72.5 9.3		2.31 0.32
191 8	3.344 0.519	0.4419 0.0676	21.0 1.5	0.273 0.054	0.651 0.042	5.8 2.5	6.67 1.02	3.00 1.14
192 2	12.143 0.513	0.0082 0.0009		0.837 0.007	1.000 0.000	124.1 13.8		
193 4	12.916 1.163	0.0047 0.0008		0.847 0.012	1.000 0.000	70.4 12.0		1.74 0.34
195 4	9.422 0.495	0.0034 0.0005		0.791 0.011	1.000 0.000	51.2 7.0		1.42 0.31
196 4	10.193 0.458	0.0061 0.0007		0.806 0.009	1.000 0.000	92.5 10.4		1.49 0.29
197 4	11.609 0.754	0.0044 0.0007		0.830 0.011	1.000 0.000	65.7 10.1		1.28 0.31
198 4	11.362 0.662	0.0048 0.0007		0.826 0.010	1.000 0.000	72.6 10.0		1.07 0.32
199 4	13.595 1.061	0.0057 0.0009		0.854 0.011	1.000 0.000	85.3 13.0		3.14 0.34
200 4	10.436 0.640	0.0034 0.0005		0.811 0.011	1.000 0.000	52.1 8.1		4.60 0.38
202 6	2.638 1.333	0.8468 0.1380	15.5 2.7	0.243 0.148	0.797 0.058	9.4 16.6	12.79 2.08	
203 4	13.239 1.025	0.0046 0.0008		0.851 0.011	1.000 0.000	69.8 11.5		4.37 0.37
204 4	10.224 0.555	0.0042 0.0006		0.807 0.010	1.000 0.000	62.8 8.4		3.56 0.34
205 4	9.922 0.508	0.0049 0.0006		0.801 0.010	1.000 0.000	73.6 9.3		3.91 0.37
206 4	10.601 0.901	0.0022 0.0005		0.814 0.015	1.000 0.000	33.6 7.8		5.21 0.41
207 4	11.029 1.735	0.0021 0.0006		0.821 0.018	1.000 0.000	32.4 8.5		5.20 0.43
208 4	11.612 0.773	0.0035 0.0006		0.830 0.011	1.000 0.000	53.5 9.4		2.53 0.34
209 4	9.427 0.599	0.0026 0.0004		0.791 0.013	1.000 0.000	39.3 6.6		5.29 0.41
210 4	11.633 2.657	0.0025 0.0006		0.830 0.020	1.000 0.000	38.3 9.8		4.98 0.45
212 4	9.239 0.474	0.0032 0.0005		0.786 0.011	1.000 0.000	48.6 6.8		3.74 0.35
213 4	11.125 0.628	0.0052 0.0007		0.822 0.010	1.000 0.000	77.8 10.4		3.10 0.35
214 6	5.454 0.287	0.3361 0.0330	16.6 0.7	0.491 0.019	0.771 0.017	7.1 1.3	5.07 0.50	

Table S4. The Results of SRLS Fitting of Combined AKeco*AP₅A ¹⁵N Relaxation Data Obtained at 14.10 and 18.79 T

[illegible]

Res. Model	c_{20} , $k_B T$	$f = \tau/\tau_m$ (or $\tau_{\perp}/\tau_m$)	β , deg.	S^2	S_f^2	$\tau_{\parallel}$, ps	$\tau_{\perp}$, ns	R_{ex} , 1/s
40	1	21.918 4.182		0.909 0.016	1.000 0.000			
41	5	3.440 0.613	15.4 1.0	0.346 0.075	0.800 0.022		7.03 0.96	
42	5	3.137 0.692	13.5 1.6	0.327 0.089	0.843 0.030		7.08 1.04	
43	6	2.642 1.163	14.7 2.1	0.249 0.138	0.815 0.043	13.1 25.5	8.10 1.71	
44	5	3.570 0.535	13.8 0.9	0.378 0.067	0.837 0.018		7.01 0.83	
45	6	2.498 1.190	13.8 2.4	0.235 0.140	0.837 0.046	13.9 32.1	8.29 1.66	
46	5	3.207 0.748	14.1 1.5	0.332 0.093	0.831 0.029		7.10 1.10	
48	6	1.773 1.236	12.7 2.5	0.133 0.145	0.861 0.050	31.1 34.8	9.61 1.67	
49	2	13.201 0.993		0.850 0.011	1.000 0.000	192.9 50.2		
50	1	21.880 4.306		0.909 0.017	1.000 0.000			0.96 0.44
51	4	13.135 1.474		0.849 0.014	1.000 0.000	182.6 77.0		
52	2	13.988 5.935		0.859 0.024	1.000 0.000	159.4 51.5		
53	1	34.154 5.888		0.942 0.013	1.000 0.000			
54	1	40.000 4.768		0.950 0.009	1.000 0.000			
55	1	23.025 4.652		0.914 0.016	1.000 0.000			
56	1	29.950 6.353		0.934 0.015	1.000 0.000			
57	3	27.888 6.994		0.929 0.018	1.000 0.000			0.99 0.51
58	4	11.893 1.002		0.834 0.013	1.000 0.000	180.0 41.5		0.68 0.47
59	1	19.113 3.044		0.896 0.016	1.000 0.000			
60	4	13.060 4.146		0.849 0.021	1.000 0.000	129.7 32.9		1.50 0.43
62	1	29.948 6.420		0.934 0.015	1.000 0.000			
65	1	40.000 3.826		0.950 0.007	1.000 0.000			
66	1	40.000 2.069		0.950 0.004	1.000 0.000			
67	1	26.151 6.000		0.924 0.016	1.000 0.000			
68	1	40.000 4.087		0.950 0.008	1.000 0.000			
69	1	33.393 6.000		0.940 0.013	1.000 0.000			
70	1	23.760 5.037		0.916 0.016	1.000 0.000			
71	1	24.871 5.610		0.920 0.016	1.000 0.000			
72	3	40.000 6.210		0.950 0.013	1.000 0.000			1.70 0.56
73	1	40.000 2.664		0.950 0.005	1.000 0.000			
74	1	14.370 1.681		0.862 0.016	1.000 0.000			

Res.	Model	$c_{20}, k_B T$	$f = \tau/\tau_m$ (or τ_1/τ_m)	β , deg.	S^2	S_f^2	$\tau_{ }$, ps	$\tau_{\perp}$, ns	R_{cs} , l/s
75	5	3.253 0.300	0.4411 0.0680	16.1 0.8	0.318 0.076	0.783 0.018		6.66 0.79	
76	1	39.664 5.713			0.950 0.011	1.000 0.000			1.25 0.47
77	3	18.924 4.562			0.895 0.021	1.000 0.000			
78	1	24.929 5.628			0.920 0.016	1.000 0.000			
79	5	3.392 0.406	0.4088 0.0525	17.3 0.6	0.323 0.053	0.747 0.015		6.17 0.61	
80	2	11.373 0.814	0.0096 0.0019		0.826 0.012	1.000 0.000	111.7 21.8		
81	1	17.519 2.580			0.887 0.016	1.000 0.000			
83	1	22.151 4.406			0.910 0.017	1.000 0.000			5.35 0.60
84	3	18.666 4.621			0.894 0.023	1.000 0.000			
86	1	40.000 2.822			0.950 0.005	1.000 0.000			
88	1	32.662 6.389			0.939 0.014	1.000 0.000			
89	1	23.779 5.113			0.916 0.017	1.000 0.000			
90	1	24.253 5.275			0.918 0.016	1.000 0.000			
92	1	23.735 5.086			0.916 0.016	1.000 0.000			
93	1	25.296 5.603			0.921 0.016	1.000 0.000			
94	1	34.414 6.111			0.942 0.013	1.000 0.000			
95	1	30.462 6.443			0.935 0.014	1.000 0.000			
96	1	33.765 6.105			0.941 0.013	1.000 0.000			
98	1	23.876 5.336			0.917 0.017	1.000 0.000			
99	4	13.407 8.436	0.0074 0.0030		0.852 0.035	1.000 0.000	86.1 34.8		1.08 0.52
100	1	19.125 2.978			0.896 0.016	1.000 0.000			
101	1	15.993 2.043			0.876 0.016	1.000 0.000			
102	6	2.411 1.077	0.6880 0.1327	18.0 3.9	0.195 0.114	0.735 0.039	10.9 9.2	7.98 1.54	
103	6	2.326 1.127	0.7527 0.1377	17.2 1.7	0.189 0.122	0.754 0.042	15.2 12.5	8.73 1.60	
104	3	17.638 3.812			0.888 0.021	1.000 0.000			1.75 0.45
105	1	17.918 2.742			0.889 0.016	1.000 0.000			
106	1	12.244 1.212			0.839 0.016	1.000 0.000			
107	1	16.366 2.234			0.879 0.016	1.000 0.000			
108	1	15.756 2.059			0.874 0.016	1.000 0.000			
109	1	18.790 2.899			0.894 0.016	1.000 0.000			
110	1	14.900 1.849			0.867 0.016	1.000 0.000			

Res. Model	$c_{20}, \text{ kBT}$	$f = \tau/\tau_m$ (or $\tau_{\perp}/\tau_m$)	β , deg.	S^2	S_f^2	$\tau_{\parallel}$, ps	$\tau_{\perp}$, ns	R_{ex} , l/s
111 1	12.393 8.013	0.0056 0.0024		0.840 0.039	1.000 0.000	65.0 28.4		1.32 0.48
1113 1	21.091 3.704			0.906 0.016	1.000 0.000			
1114 1	26.491 6.219			0.925 0.016	1.000 0.000			
1115 1	32.118 6.388			0.938 0.014	1.000 0.000			
1116 1	32.592 6.384			0.939 0.014	1.000 0.000			
1117 1	40.000 5.106			0.950 0.010	1.000 0.000			
1118 2	17.837 10.578	0.0111 0.0066		0.889 0.034	1.000 0.000	128.6 76.7		
1119 3	23.197 6.191			0.914 0.020	1.000 0.000			1.43 0.49
122 3	26.706 7.083			0.926 0.020	1.000 0.000			2.27 0.52
123 3	40.000 3.413			0.950 0.006	1.000 0.000			1.02 0.55
125 1	30.530 6.462			0.935 0.015	1.000 0.000			
126 1	21.068 3.759			0.906 0.016	1.000 0.000			1.40 0.45
127 4	12.050 5.202	0.0079 0.0023		0.836 0.026	1.000 0.000	92.0 26.5		
129 1	16.728 2.294			0.882 0.016	1.000 0.000			
130 1	23.664 4.966			0.916 0.016	1.000 0.000			
131 1	32.197 6.151			0.938 0.014	1.000 0.000			
132 4	13.309 3.014	0.0119 0.0027		0.851 0.017	1.000 0.000	138.3 31.4		1.91 0.42
133 4	13.739 7.287	0.0087 0.0032		0.856 0.030	1.000 0.000	100.6 36.7		1.82 0.51
134 1	20.756 3.771			0.904 0.016	1.000 0.000			
135 1	27.887 6.625			0.929 0.016	1.000 0.000			
136 1	23.082 4.810			0.914 0.017	1.000 0.000			
138 4	11.991 0.968	0.0130 0.0024		0.835 0.013	1.000 0.000	150.3 28.3		0.66 0.45
141 1	15.146 1.854			0.869 0.016	1.000 0.000			
142 4	13.109 8.931	0.0068 0.0029		0.849 0.038	1.000 0.000	79.2 33.6		0.86 0.50
143 2	12.841 6.663	0.0066 0.0028		0.846 0.031	1.000 0.000	76.6 33.0		
144 4	13.792 10.668	0.0066 0.0033		0.857 0.043	1.000 0.000	76.9 38.8		0.54 0.46
145 1	32.865 6.042			0.939 0.013	1.000 0.000			
146 1	20.082 3.473			0.901 0.016	1.000 0.000			
147 1	20.321 3.546			0.902 0.016	1.000 0.000			
148 1	15.782 2.037			0.874 0.016	1.000 0.000			
149 1	15.992 2.150			0.876 0.016	1.000 0.000			

Res. Model	$c_{20}, k_B T$	$f = \tau/\tau_m$ (or $\tau_{\perp}/\tau_m$)	β , deg.	S^2	S_f^2	$\tau_{\parallel}$, ps	$\tau_{\perp}$, ns	R_{ex} , 1/s
150	1	32.095	6.203	0.938	0.014	1.000	0.000	
151	1	30.312	6.435	0.934	0.015	1.000	0.000	
152	2	12.121	2.934	0.837	0.017	1.000	0.000	
153	4	12.486	3.444	0.842	0.019	1.000	0.000	1.20 0.44
154	1	16.650	2.274	0.881	0.016	1.000	0.000	
155	4	13.302	5.062	0.851	0.024	1.000	0.000	
156	7	2.246	0.846	0.160	0.078	0.678	0.070	
158	5	3.391	0.672	0.376	0.091	0.883	0.027	
160	6	2.595	1.004	0.216	0.107	0.725	0.035	
161	1	21.250	3.756	0.907	0.016	1.000	0.000	
162	4	14.008	5.009	0.859	0.022	1.000	0.000	1.37 0.47
163	1	19.879	3.341	0.900	0.016	1.000	0.000	
164	1	40.000	6.075	0.950	0.012	1.000	0.000	
165	3	19.046	4.707	0.896	0.022	1.000	0.000	1.73 0.47
168	1	19.161	3.142	0.896	0.016	1.000	0.000	
169	1	30.531	6.593	0.935	0.015	1.000	0.000	
170	1	30.947	6.667	0.936	0.015	1.000	0.000	
171	3	19.187	4.701	0.897	0.022	1.000	0.000	
172	3	18.912	4.622	0.895	0.022	1.000	0.000	1.67 0.46
173	3	13.738	2.167	0.856	0.021	1.000	0.000	1.89 0.48
174	3	12.687	1.798	0.844	0.021	1.000	0.000	1.57 0.44
175	3	13.618	2.050	0.855	0.020	1.000	0.000	1.49 0.45
176	1	40.000	2.583	0.950	0.005	1.000	0.000	1.85 0.43
178	3	18.284	4.224	0.892	0.022	1.000	0.000	
179	1	31.480	6.381	0.937	0.014	1.000	0.000	1.45 0.47
180	1	19.602	3.284	0.899	0.016	1.000	0.000	
181	1	30.358	6.609	0.934	0.015	1.000	0.000	
182	3	19.969	5.347	0.901	0.022	1.000	0.000	
183	1	40.000	1.910	0.950	0.003	1.000	0.000	1.33 0.50
184	1	27.491	6.615	0.928	0.016	1.000	0.000	
185	1	22.919	4.675	0.913	0.017	1.000	0.000	

Res. Model	$c_{20}, k_B T$	$f = \tau/\tau_m$ (or τ_L/τ_m)	β , deg.	S^2	S_f^2	$\tau_{ }$, ps	$\tau_{\perp}$, ns	R_{ex} , 1/s
186	1	31.810 6.332		0.937 0.014	1.000 0.000			
187	1	23.853 5.075		0.917 0.016	1.000 0.000			
188	1	19.142 3.175		0.896 0.017	1.000 0.000			
189	1	15.551 2.006		0.873 0.016	1.000 0.000			
190	2	24.631 6.668		0.919 0.017	1.000 0.000	189.6 90.0		
191	2	15.506 8.492		0.872 0.030	1.000 0.000	136.3 58.0		
192	2	15.213 11.163		0.870 0.041	1.000 0.000	90.6 52.8		
193	4	11.394 1.075		0.827 0.016	1.000 0.000	80.8 17.9		0.76 0.46
194	1	20.763 3.665		0.904 0.016	1.000 0.000			
195	2	13.313 4.829		0.851 0.033	1.000 0.000	32.7 24.6		
196	4	13.739 7.287		0.856 0.030	1.000 0.000	100.6 36.7		1.82 0.51
197	1	14.089 1.662		0.860 0.016	1.000 0.000			
198	1	13.955 1.586		0.858 0.016	1.000 0.000			
199	1	40.000 1.679		0.950 0.003	1.000 0.000			
200	1	28.227 6.634		0.930 0.016	1.000 0.000			
202	1	20.181 3.478		0.902 0.016	1.000 0.000			
203	1	40.000 4.760		0.950 0.009	1.000 0.000			
204	1	21.404 3.906		0.907 0.016	1.000 0.000			
205	1	25.403 6.383		0.922 0.017	1.000 0.000			
206	3	16.887 3.534		0.883 0.022	1.000 0.000			1.28 0.48
207	1	30.997 6.495		0.936 0.014	1.000 0.000			
208	1	23.207 4.593		0.914 0.016	1.000 0.000			
209	3	16.310 3.368		0.878 0.022	1.000 0.000			1.26 0.49
210	1	24.099 5.139		0.918 0.016	1.000 0.000			
211	1	23.100 4.767		0.914 0.016	1.000 0.000			
212	4	11.136 3.457		0.823 0.027	1.000 0.000	56.4 18.7		1.70 0.43
213	1	20.014 3.362		0.901 0.016	1.000 0.000			
214	6	3.407 0.737	16.8 1.0	0.329 0.084	0.766 0.024	11.7 11.8	5.59 1.25	

**Table S5. The Results of MF Fitting of the Combined *E. coli* AKeco*AP₅A
¹⁵N Relaxation Data Obtained at 14.10 and 18.79 T**

Res.	Model	S ²		S ² _f		τ _s , ns	τ _f , ps	R _{ex} , 1/s	
2	3	0.824	0.045	1.000	0.000			0.98	0.89
3	1	0.868	0.019	1.000	0.000				
4	1	0.873	0.010	1.000	0.000				
5	4	0.878	0.056	1.000	0.000		15.5 12.2	1.15	1.14
6	1	0.906	0.018	1.000	0.000				
7	2	0.871	0.025	1.000	0.000		23.5 9.8		
8	3	0.923	0.029	1.000	0.000			2.17	0.59
10	3	0.924	0.022	1.000	0.000			1.77	0.43
11	1	0.988	0.022	1.000	0.000				
13	2	0.904	0.034	1.000	0.000		44.6 23.3		
15	1	0.918	0.020	1.000	0.000				
16	1	0.930	0.016	1.000	0.000				
17	1	0.949	0.008	1.000	0.000				
18	1	0.898	0.018	1.000	0.000				
19	1	0.926	0.017	1.000	0.000				
21	1	0.939	0.014	1.000	0.000				
22	1	0.903	0.018	1.000	0.000				
23	1	0.891	0.021	1.000	0.000				
24	1	0.875	0.018	1.000	0.000				
25	1	0.899	0.015	1.000	0.000				
26	1	0.903	0.015	1.000	0.000				
28	2	0.857	0.023	1.000	0.000		14.0 7.6		
29	3	0.891	0.033	1.000	0.000			5.72	0.80
31	1	0.963	0.011	1.000	0.000				
33	5	0.611	0.043	0.813	0.034	0.55 0.30			
34	1	0.962	0.017	1.000	0.000				
35	1	0.908	0.009	1.000	0.000				
36	1	0.922	0.015	1.000	0.000				
37	1	0.903	0.015	1.000	0.000				
38	2	0.847	0.019	1.000	0.000		16.7 5.6		
39	5	0.793	0.023	0.906	0.017	0.46 0.14			
40	1	0.897	0.021	1.000	0.000				
41	2	0.854	0.022	1.000	0.000		20.8 7.1		
42	5	0.759	0.044	0.901	0.031	1.19 0.49			
43	5	0.727	0.031	0.889	0.022	0.70 0.17			
44	2	0.895	0.014	1.000	0.000		30.3 6.9		
45	5	0.745	0.038	0.900	0.027	0.80 0.23			
46	5	0.755	0.049	0.894	0.034	0.95 0.50			
48	2	0.864	0.035	1.000	0.000		46.3 17.4		
49	2	0.855	0.030	1.000	0.000		30.2 11.2		
50	1	0.896	0.019	1.000	0.000				
51	2	0.887	0.020	1.000	0.000		36.6 10.3		

Res.	Model	S^2		S^2_f		τ_s , ns	τ_f , ps		R_{ex} , 1/s
52	2	0.858	0.022	1.000	0.000		24.8	7.8	
53	1	0.928	0.015	1.000	0.000				
54	1	0.940	0.015	1.000	0.000				
55	1	0.901	0.022	1.000	0.000				
56	1	0.917	0.022	1.000	0.000				
57	1	0.950	0.024	1.000	0.000				
58	2	0.862	0.025	1.000	0.000		35.9	10.6	
59	1	0.882	0.021	1.000	0.000				
60	2	0.892	0.024	1.000	0.000		28.7	11.7	
62	1	0.919	0.018	1.000	0.000				
63	3	0.916	0.022	1.000	0.000				1.89 0.45
65	1	0.945	0.013	1.000	0.000				
66	1	0.958	0.016	1.000	0.000				
67	1	0.911	0.016	1.000	0.000				
68	1	0.943	0.020	1.000	0.000				
69	1	0.926	0.012	1.000	0.000				
70	1	0.904	0.014	1.000	0.000				
71	1	0.907	0.015	1.000	0.000				
72	3	0.941	0.023	1.000	0.000				1.65 0.46
73	1	0.954	0.012	1.000	0.000				
74	1	0.852	0.019	1.000	0.000				
75	2	0.881	0.028	1.000	0.000		27.0	12.0	
76	1	0.934	0.017	1.000	0.000				
77	3	0.885	0.033	1.000	0.000				1.19 0.66
78	1	0.908	0.018	1.000	0.000				
79	2	0.841	0.015	1.000	0.000		22.5	4.6	
80	2	0.811	0.022	1.000	0.000		20.0	5.5	
81	1	0.875	0.013	1.000	0.000				
83	1	0.894	0.018	1.000	0.000				
84	3	0.884	0.043	1.000	0.000				5.16 1.02
86	1	0.953	0.010	1.000	0.000				
88	1	0.925	0.021	1.000	0.000				
89	1	0.903	0.013	1.000	0.000				
90	1	0.906	0.008	1.000	0.000				
92	1	0.904	0.009	1.000	0.000				
93	1	0.906	0.016	1.000	0.000				
94	1	0.929	0.009	1.000	0.000				
95	1	0.922	0.009	1.000	0.000				
96	1	0.928	0.016	1.000	0.000				
98	1	0.898	0.021	1.000	0.000				
99	2	0.866	0.013	1.000	0.000		16.9	4.7	
100	2	0.875	0.028	1.000	0.000		13.4	10.6	
101	1	0.863	0.021	1.000	0.000				
102	5	0.548	0.044	0.787	0.037	0.87 0.25			
103	5	0.625	0.037	0.824	0.030	0.46 0.23			

Res.	Model	S^2		S^2_f		τ_s , ns	τ_f , ps	R_{ex} , 1/s	
104	3	0.878	0.042	1.000	0.000			1.68	0.85
105	1	0.876	0.016	1.000	0.000				
106	1	0.828	0.016	1.000	0.000				
107	1	0.866	0.015	1.000	0.000				
108	1	0.862	0.013	1.000	0.000				
109	1	0.879	0.018	1.000	0.000				
110	1	0.857	0.015	1.000	0.000				
111	2	0.853	0.025	1.000	0.000		14.3 7.8		
113	1	0.891	0.014	1.000	0.000				
114	1	0.912	0.016	1.000	0.000				
115	1	0.925	0.024	1.000	0.000				
116	1	0.924	0.021	1.000	0.000				
117	1	0.937	0.017	1.000	0.000				
118	2	0.878	0.025	1.000	0.000		20.0 9.8		
119	3	0.904	0.044	1.000	0.000			1.37	0.86
121	4	0.915	0.063	1.000	0.000		28.6 25.0	2.26	1.31
122	3	0.917	0.023	1.000	0.000			2.17	0.48
123	1	0.999	0.021	1.000	0.000				
124	4	0.882	0.064	1.000	0.000		19.0 17.7	3.05	1.39
125	1	0.921	0.020	1.000	0.000				
126	1	0.893	0.022	1.000	0.000				
127	2	0.864	0.022	1.000	0.000		20.7 7.5		
129	1	0.871	0.020	1.000	0.000				
130	1	0.904	0.022	1.000	0.000				
131	1	0.925	0.014	1.000	0.000				
132	2	0.912	0.022	1.000	0.000		35.6 14.3		
133	2	0.900	0.030	1.000	0.000		23.5 14.8		
134	1	0.890	0.016	1.000	0.000				
135	1	0.915	0.015	1.000	0.000				
136	1	0.901	0.018	1.000	0.000				
138	2	0.855	0.026	1.000	0.000		29.0 9.5		
141	2	0.851	0.021	1.000	0.000		13.0 6.4		
142	2	0.851	0.017	1.000	0.000		15.4 5.0		
143	2	0.818	0.018	1.000	0.000		14.5 4.4		
144	2	0.845	0.020	1.000	0.000		14.0 5.7		
145	1	0.925	0.020	1.000	0.000				
146	1	0.888	0.018	1.000	0.000				
147	1	0.890	0.014	1.000	0.000				
148	1	0.863	0.022	1.000	0.000				
149	1	0.864	0.017	1.000	0.000				
150	1	0.925	0.014	1.000	0.000				
151	1	0.922	0.016	1.000	0.000				
152	2	0.824	0.023	1.000	0.000		20.0 6.2		
153	2	0.881	0.019	1.000	0.000		32.3 8.8		
154	2	0.863	0.014	1.000	0.000		15.3 4.6		

Res. Model		S^2		S^2_f		τ_s , ns	τ_f , ps		R_{ex} , 1/s
155	4	0.870	0.042	1.000	0.000		20.1	11.5	2.81 0.90
158	2	0.942	0.036	1.000	0.000		54.6	48.0	
160	5	0.583	0.052	0.807	0.043	0.55 0.27			
161	1	0.893	0.021	1.000	0.000				
162	2	0.900	0.013	1.000	0.000		29.1	7.0	
163	1	0.887	0.022	1.000	0.000				
164	1	0.929	0.021	1.000	0.000				
165	3	0.886	0.025	1.000	0.000				1.65 0.51
168	1	0.884	0.019	1.000	0.000				
169	1	0.918	0.020	1.000	0.000				
170	1	0.923	0.021	1.000	0.000				
171	3	0.888	0.016	1.000	0.000				1.59 0.32
172	3	0.886	0.021	1.000	0.000				1.81 0.43
173	3	0.849	0.022	1.000	0.000				1.51 0.45
174	3	0.838	0.025	1.000	0.000				1.41 0.49
175	3	0.846	0.033	1.000	0.000				1.76 0.68
176	1	0.954	0.013	1.000	0.000				
178	3	0.882	0.024	1.000	0.000				1.39 0.48
179	1	0.925	0.007	1.000	0.000				
180	1	0.884	0.014	1.000	0.000				
181	1	0.919	0.018	1.000	0.000				
182	1	0.932	0.024	1.000	0.000				
183	1	0.962	0.017	1.000	0.000				
184	1	0.915	0.010	1.000	0.000				
185	1	0.901	0.019	1.000	0.000				
186	1	0.924	0.013	1.000	0.000				
187	1	0.903	0.015	1.000	0.000				
188	1	0.882	0.020	1.000	0.000				
189	1	0.861	0.017	1.000	0.000				
191	2	0.859	0.033	1.000	0.000		18.8	11.2	
192	2	0.847	0.019	1.000	0.000		16.7	5.7	
193	2	0.828	0.014	1.000	0.000		16.4	3.8	
194	1	0.892	0.010	1.000	0.000				
195	2	0.799	0.017	1.000	0.000		9.3	3.7	
196	2	0.900	0.030	1.000	0.000		23.5	14.5	
197	1	0.848	0.018	1.000	0.000				
198	1	0.848	0.014	1.000	0.000				
199	1	0.964	0.017	1.000	0.000				
200	1	0.915	0.018	1.000	0.000				
202	1	0.887	0.018	1.000	0.000				
203	1	0.939	0.019	1.000	0.000				
204	1	0.893	0.020	1.000	0.000				
205	1	0.905	0.019	1.000	0.000				
206	1	0.914	0.022	1.000	0.000				
207	1	0.920	0.018	1.000	0.000				

Res. Model		S^2		S^2_f		τ_s , ns	τ_f , ps	R_{ex} , 1/s
208	1	0.897	0.019	1.000	0.000			
209	3	0.870	0.035	1.000	0.000			1.15 0.69
210	1	0.899	0.022	1.000	0.000			
211	1	0.900	0.019	1.000	0.000			
212	2	0.845	0.033	1.000	0.000		13.4 9.5	
213	1	0.887	0.021	1.000	0.000			
214	5	0.584	0.051	0.845	0.042	0.95 0.18		