

Appendix 1-table 6. Normalized fold change for all possible *CDKN2A* missense and synonymous variants.

Residue	Variant	Normalized fold change_1	Log2 normalized fold change_1	Classification_1	Normalized fold change_2	Log2 normalized fold change_2	Classification_2	Mean of normalized fold change	Mean of log normalized fold change	Classification_merged
1	p.Met1Asn	0.92	-0.12	Neutral				0.92	-0.12	Neutral
1	p.Met1Lys	0.82	-0.29	Neutral				0.82	-0.29	Neutral
1	p.Met1Thr	0.94	-0.09	Neutral				0.94	-0.09	Neutral
1	p.Met1Arg	0.79	-0.33	Neutral				0.79	-0.33	Neutral
1	p.Met1Ser	0.92	-0.12	Neutral				0.92	-0.12	Neutral
1	p.Met1Ile	0.92	-0.12	Neutral				0.92	-0.12	Neutral
1	p.Met1Met	1.00	0.00	Neutral				1.00	0.00	Neutral
1	p.Met1His	1.01	0.02	Neutral				1.01	0.02	Neutral
1	p.Met1Gln	0.96	-0.05	Neutral				0.96	-0.05	Neutral
1	p.Met1Pro	0.87	-0.20	Neutral				0.87	-0.20	Neutral
1	p.Met1Leu	0.96	-0.06	Neutral				0.96	-0.06	Neutral
1	p.Met1Asp	0.86	-0.22	Neutral				0.86	-0.22	Neutral
1	p.Met1Glu	0.97	-0.04	Neutral				0.97	-0.04	Neutral
1	p.Met1Ala	0.90	-0.16	Neutral				0.90	-0.16	Neutral
1	p.Met1Gly	0.94	-0.09	Neutral				0.94	-0.09	Neutral
1	p.Met1Val	1.61	0.69	Indeterminate				1.61	0.69	Indeterminate
1	p.Met1Tyr	0.92	-0.13	Neutral				0.92	-0.13	Neutral
1	p.Met1Cys	0.90	-0.15	Neutral				0.90	-0.15	Neutral
1	p.Met1Trp	0.92	-0.12	Neutral				0.92	-0.12	Neutral
1	p.Met1Phe	0.97	-0.04	Neutral				0.97	-0.04	Neutral
2	p.Glu2Asn	0.20	-2.29	Neutral				0.20	-2.29	Neutral
2	p.Glu2Lys	0.39	-1.35	Neutral				0.39	-1.35	Neutral
2	p.Glu2Thr	0.41	-1.27	Neutral				0.41	-1.27	Neutral
2	p.Glu2Arg	0.21	-2.22	Neutral				0.21	-2.22	Neutral
2	p.Glu2Ser	0.64	-0.65	Neutral				0.64	-0.65	Neutral
2	p.Glu2Ile	0.24	-2.03	Neutral				0.24	-2.03	Neutral
2	p.Glu2Met	0.57	-0.81	Neutral				0.57	-0.81	Neutral
2	p.Glu2His	0.40	-1.34	Neutral				0.40	-1.34	Neutral
2	p.Glu2Gln	0.27	-1.90	Neutral				0.27	-1.90	Neutral
2	p.Glu2Pro	0.31	-1.70	Neutral				0.31	-1.70	Neutral
2	p.Glu2Leu	0.25	-2.02	Neutral				0.25	-2.02	Neutral
2	p.Glu2Asp	0.15	-2.75	Neutral				0.15	-2.75	Neutral
2	p.Glu2Glu	1.00	0.00	Neutral				1.00	0.00	Neutral
2	p.Glu2Ala	0.61	-0.71	Neutral				0.61	-0.71	Neutral
2	p.Glu2Gly	0.36	-1.49	Neutral				0.36	-1.49	Neutral
2	p.Glu2Val	0.23	-2.10	Neutral				0.23	-2.10	Neutral
2	p.Glu2Tyr	0.31	-1.69	Neutral				0.31	-1.69	Neutral
2	p.Glu2Cys	0.64	-0.64	Neutral				0.64	-0.64	Neutral
2	p.Glu2Trp	0.44	-1.18	Neutral				0.44	-1.18	Neutral
2	p.Glu2Phe	0.38	-1.38	Neutral				0.38	-1.38	Neutral
3	p.Pro3Asn	1.38	0.46	Indeterminate				1.38	0.46	Indeterminate
3	p.Pro3Lys	1.48	0.57	Indeterminate				1.48	0.57	Indeterminate
3	p.Pro3Thr	1.39	0.48	Indeterminate				1.39	0.48	Indeterminate
3	p.Pro3Arg	2.22	1.15	Deleterious				2.22	1.15	Deleterious
3	p.Pro3Ser	1.71	0.78	Indeterminate				1.71	0.78	Indeterminate
3	p.Pro3Ile	1.33	0.41	Indeterminate				1.33	0.41	Indeterminate
3	p.Pro3Met	1.69	0.76	Indeterminate				1.69	0.76	Indeterminate
3	p.Pro3His	1.08	0.11	Neutral				1.08	0.11	Neutral
3	p.Pro3Gln	0.74	-0.44	Neutral				0.74	-0.44	Neutral
3	p.Pro3Pro	1.00	0.00	Neutral				1.00	0.00	Neutral
3	p.Pro3Leu	1.52	0.60	Indeterminate				1.52	0.60	Indeterminate
3	p.Pro3Asp	1.68	0.75	Indeterminate				1.68	0.75	Indeterminate
3	p.Pro3Glu	1.15	0.20	Neutral				1.15	0.20	Neutral
3	p.Pro3Ala	1.06	0.09	Neutral				1.06	0.09	Neutral
3	p.Pro3Gly	2.75	1.46	Deleterious				2.75	1.46	Deleterious
3	p.Pro3Val	1.71	0.77	Indeterminate				1.71	0.77	Indeterminate
3	p.Pro3Tyr	1.18	0.23	Neutral				1.18	0.23	Neutral
3	p.Pro3Cys	1.49	0.58	Indeterminate				1.49	0.58	Indeterminate
3	p.Pro3Trp	1.94	0.96	Indeterminate				1.94	0.96	Indeterminate
3	p.Pro3Phe	1.69	0.76	Indeterminate				1.69	0.76	Indeterminate
4	p.Ala4Asn	1.36	0.44	Indeterminate				1.36	0.44	Indeterminate
4	p.Ala4Lys	0.98	-0.02	Neutral				0.98	-0.02	Neutral
4	p.Ala4Thr	2.78	1.48	Deleterious				2.78	1.48	Deleterious
4	p.Ala4Arg	1.07	0.10	Neutral				1.07	0.10	Neutral
4	p.Ala4Ser	2.88	1.53	Deleterious				2.88	1.53	Deleterious
4	p.Ala4Ile	0.76	-0.40	Neutral				0.76	-0.40	Neutral
4	p.Ala4Met	1.45	0.54	Indeterminate				1.45	0.54	Indeterminate
4	p.Ala4His	1.16	0.21	Neutral				1.16	0.21	Neutral
4	p.Ala4Gln	0.77	-0.37	Neutral				0.77	-0.37	Neutral
4	p.Ala4Pro	0.84	-0.25	Neutral				0.84	-0.25	Neutral
4	p.Ala4Leu	0.96	-0.06	Neutral				0.96	-0.06	Neutral
4	p.Ala4Asp	1.10	0.13	Neutral				1.10	0.13	Neutral
4	p.Ala4Glu	0.65	-0.63	Neutral				0.65	-0.63	Neutral
4	p.Ala4Ala	1.00	0.00	Neutral				1.00	0.00	Neutral
4	p.Ala4Gly	1.34	0.42	Indeterminate				1.34	0.42	Indeterminate
4	p.Ala4Val	0.78	-0.36	Neutral				0.78	-0.36	Neutral
4	p.Ala4Tyr	0.90	-0.15	Neutral				0.90	-0.15	Neutral
4	p.Ala4Cys	2.08	1.06	Indeterminate				2.08	1.06	Indeterminate
4	p.Ala4Trp	1.12	0.16	Neutral				1.12	0.16	Neutral
4	p.Ala4Phe	1.42	0.51	Indeterminate				1.42	0.51	Indeterminate
5	p.Ala5Asn	0.80	-0.32	Neutral				0.80	-0.32	Neutral
5	p.Ala5Lys	0.37	-1.44	Neutral				0.37	-1.44	Neutral
5	p.Ala5Thr	1.04	0.05	Neutral				1.04	0.05	Neutral
5	p.Ala5Arg	0.57	-0.81	Neutral				0.57	-0.81	Neutral
5	p.Ala5Ser	2.86	1.52	Deleterious				2.86	1.52	Deleterious
5	p.Ala5Ile	0.31	-1.68	Neutral				0.31	-1.68	Neutral
5	p.Ala5Met	0.87	-0.21	Neutral				0.87	-0.21	Neutral
5	p.Ala5His	1.10	0.14	Neutral				1.10	0.14	Neutral
5	p.Ala5Gln	1.11	0.15	Neutral				1.11	0.15	Neutral
5	p.Ala5Pro	0.86	-0.21	Neutral				0.86	-0.21	Neutral
5	p.Ala5Leu	1.88	0.91	Indeterminate				1.88	0.91	Indeterminate
5	p.Ala5Asp	1.14	0.19	Neutral				1.14	0.19	Neutral
5	p.Ala5Glu	1.37	0.46	Indeterminate				1.37	0.46	Indeterminate
5	p.Ala5Ala	1.00	0.00	Neutral				1.00	0.00	Neutral
5	p.Ala5Gly	0.77	-0.38	Neutral				0.77	-0.38	Neutral
5	p.Ala5Val	0.89	-0.17	Neutral				0.89	-0.17	Neutral
5	p.Ala5Tyr	4.82	2.27	Deleterious				4.82	2.27	Deleterious
5	p.Ala5Cys	1.26	0.34	Indeterminate				1.26	0.34	Indeterminate
5	p.Ala5Trp	2.44	1.29	Deleterious				2.44	1.29	Deleterious
5	p.Ala5Phe	0.90	-0.16	Neutral				0.90	-0.16	Neutral
6	p.Gly6Asn	0.95	-0.07	Neutral				0.95	-0.07	Neutral

6	p.Gly6Lys	1.40	0.48	Indeterminate	1.40	0.48	Indeterminate
6	p.Gly6Thr	1.47	0.56	Indeterminate	1.47	0.56	Indeterminate
6	p.Gly6Arg	4.48	2.16	Deleterious	4.48	2.16	Deleterious
6	p.Gly6Ser	3.45	1.79	Deleterious	3.45	1.79	Deleterious
6	p.Gly6Ile	3.76	1.91	Deleterious	3.76	1.91	Deleterious
6	p.Gly6Met	3.51	1.81	Deleterious	3.51	1.81	Deleterious
6	p.Gly6His	0.72	-0.48	Neutral	0.72	-0.48	Neutral
6	p.Gly6Gln	0.87	-0.20	Neutral	0.87	-0.20	Neutral
6	p.Gly6Pro	2.07	1.05	Indeterminate	2.07	1.05	Indeterminate
6	p.Gly6Leu	1.24	0.32	Indeterminate	1.24	0.32	Indeterminate
6	p.Gly6Asp	1.04	0.06	Neutral	1.04	0.06	Neutral
6	p.Gly6Glu	1.16	0.22	Neutral	1.16	0.22	Neutral
6	p.Gly6Ala	1.05	0.07	Neutral	1.05	0.07	Neutral
6	p.Gly6Gly	1.00	0.00	Neutral	1.00	0.00	Neutral
6	p.Gly6Val	1.00	0.00	Neutral	1.00	0.00	Neutral
6	p.Gly6Tyr	1.01	0.01	Neutral	1.01	0.01	Neutral
6	p.Gly6Cys	1.83	0.87	Indeterminate	1.83	0.87	Indeterminate
6	p.Gly6Trp	1.44	0.53	Indeterminate	1.44	0.53	Indeterminate
6	p.Gly6Phe	1.58	0.66	Indeterminate	1.58	0.66	Indeterminate
7	p.Ser7Asn	0.89	-0.17	Neutral	0.89	-0.17	Neutral
7	p.Ser7Lys	0.91	-0.14	Neutral	0.91	-0.14	Neutral
7	p.Ser7Thr	2.04	1.03	Indeterminate	2.04	1.03	Indeterminate
7	p.Ser7Arg	0.82	-0.29	Neutral	0.82	-0.29	Neutral
7	p.Ser7Ser	1.00	0.00	Neutral	1.00	0.00	Neutral
7	p.Ser7Ile	1.23	0.30	Indeterminate	1.23	0.30	Indeterminate
7	p.Ser7Met	1.18	0.24	Indeterminate	1.18	0.24	Indeterminate
7	p.Ser7His	1.47	0.56	Indeterminate	1.47	0.56	Indeterminate
7	p.Ser7Gln	1.10	0.14	Neutral	1.10	0.14	Neutral
7	p.Ser7Pro	1.26	0.34	Indeterminate	1.26	0.34	Indeterminate
7	p.Ser7Leu	1.80	0.85	Indeterminate	1.80	0.85	Indeterminate
7	p.Ser7Asp	0.99	-0.02	Neutral	0.99	-0.02	Neutral
7	p.Ser7Glu	1.65	0.73	Indeterminate	1.65	0.73	Indeterminate
7	p.Ser7Ala	1.95	0.97	Indeterminate	1.95	0.97	Indeterminate
7	p.Ser7Gly	0.93	-0.10	Neutral	0.93	-0.10	Neutral
7	p.Ser7Val	1.00	0.00	Neutral	1.00	0.00	Neutral
7	p.Ser7Tyr	2.57	1.36	Deleterious	2.57	1.36	Deleterious
7	p.Ser7Cys	1.26	0.33	Indeterminate	1.26	0.33	Indeterminate
7	p.Ser7Trp	1.31	0.39	Indeterminate	1.31	0.39	Indeterminate
7	p.Ser7Phe	1.17	0.22	Neutral	1.17	0.22	Neutral
8	p.Ser8Asn	0.57	-0.81	Neutral	0.57	-0.81	Neutral
8	p.Ser8Lys	1.73	0.79	Indeterminate	1.73	0.79	Indeterminate
8	p.Ser8Thr	0.92	-0.12	Neutral	0.92	-0.12	Neutral
8	p.Ser8Arg	0.69	-0.53	Neutral	0.69	-0.53	Neutral
8	p.Ser8Ser	1.00	0.00	Neutral	1.00	0.00	Neutral
8	p.Ser8Ile	0.72	-0.48	Neutral	0.72	-0.48	Neutral
8	p.Ser8Met	0.56	-0.85	Neutral	0.56	-0.85	Neutral
8	p.Ser8His	0.60	-0.73	Neutral	0.60	-0.73	Neutral
8	p.Ser8Gln	0.67	-0.59	Neutral	0.67	-0.59	Neutral
8	p.Ser8Pro	0.83	-0.26	Neutral	0.83	-0.26	Neutral
8	p.Ser8Leu	0.84	-0.26	Neutral	0.84	-0.26	Neutral
8	p.Ser8Asp	0.73	-0.46	Neutral	0.73	-0.46	Neutral
8	p.Ser8Glu	0.45	-1.15	Neutral	0.45	-1.15	Neutral
8	p.Ser8Ala	0.68	-0.56	Neutral	0.68	-0.56	Neutral
8	p.Ser8Gly	0.82	-0.28	Neutral	0.82	-0.28	Neutral
8	p.Ser8Val	0.71	-0.49	Neutral	0.71	-0.49	Neutral
8	p.Ser8Tyr	0.61	-0.72	Neutral	0.61	-0.72	Neutral
8	p.Ser8Cys	0.52	-0.94	Neutral	0.52	-0.94	Neutral
8	p.Ser8Trp	0.58	-0.79	Neutral	0.58	-0.79	Neutral
8	p.Ser8Phe	0.75	-0.41	Neutral	0.75	-0.41	Neutral
9	p.Met9Asn	1.10	0.14	Neutral	1.10	0.14	Neutral
9	p.Met9Lys	1.21	0.27	Indeterminate	1.21	0.27	Indeterminate
9	p.Met9Thr	1.19	0.26	Indeterminate	1.19	0.26	Indeterminate
9	p.Met9Arg	1.14	0.18	Neutral	1.14	0.18	Neutral
9	p.Met9Ser	1.16	0.22	Neutral	1.16	0.22	Neutral
9	p.Met9Ile	1.18	0.24	Indeterminate	1.18	0.24	Indeterminate
9	p.Met9Met	1.00	0.00	Neutral	1.00	0.00	Neutral
9	p.Met9His	1.05	0.07	Neutral	1.05	0.07	Neutral
9	p.Met9Gln	1.04	0.05	Neutral	1.04	0.05	Neutral
9	p.Met9Pro	1.18	0.24	Neutral	1.18	0.24	Neutral
9	p.Met9Leu	0.92	-0.11	Neutral	0.92	-0.11	Neutral
9	p.Met9Asp	1.16	0.21	Neutral	1.16	0.21	Neutral
9	p.Met9Glu	1.02	0.03	Neutral	1.02	0.03	Neutral
9	p.Met9Ala	1.07	0.10	Neutral	1.07	0.10	Neutral
9	p.Met9Gly	1.10	0.14	Neutral	1.10	0.14	Neutral
9	p.Met9Val	1.25	0.32	Indeterminate	1.25	0.32	Indeterminate
9	p.Met9Tyr	1.00	0.00	Neutral	1.00	0.00	Neutral
9	p.Met9Cys	1.08	0.11	Neutral	1.08	0.11	Neutral
9	p.Met9Trp	1.13	0.17	Neutral	1.13	0.17	Neutral
9	p.Met9Phe	1.14	0.19	Neutral	1.14	0.19	Neutral
10	p.Glu10Asn	1.08	0.11	Neutral	1.08	0.11	Neutral
10	p.Glu10Lys	2.31	1.21	Deleterious	2.31	1.21	Deleterious
10	p.Glu10Thr	1.18	0.24	Neutral	1.18	0.24	Neutral
10	p.Glu10Arg	0.94	-0.09	Neutral	0.94	-0.09	Neutral
10	p.Glu10Ser	1.65	0.72	Indeterminate	1.65	0.72	Indeterminate
10	p.Glu10Ile	1.54	0.62	Indeterminate	1.54	0.62	Indeterminate
10	p.Glu10Met	1.67	0.74	Indeterminate	1.67	0.74	Indeterminate
10	p.Glu10His	2.29	1.20	Deleterious	2.29	1.20	Deleterious
10	p.Glu10Gln	0.93	-0.10	Neutral	0.93	-0.10	Neutral
10	p.Glu10Pro	1.03	0.04	Neutral	1.03	0.04	Neutral
10	p.Glu10Leu	1.15	0.20	Neutral	1.15	0.20	Neutral
10	p.Glu10Asp	1.13	0.17	Neutral	1.13	0.17	Neutral
10	p.Glu10Glu	1.00	0.00	Neutral	1.00	0.00	Neutral
10	p.Glu10Ala	1.77	0.82	Indeterminate	1.77	0.82	Indeterminate
10	p.Glu10Gly	1.04	0.06	Neutral	1.04	0.06	Neutral
10	p.Glu10Val	1.04	0.06	Neutral	1.04	0.06	Neutral
10	p.Glu10Tyr	1.33	0.41	Indeterminate	1.33	0.41	Indeterminate
10	p.Glu10Cys	1.15	0.20	Neutral	1.15	0.20	Neutral
10	p.Glu10Trp	1.01	0.02	Neutral	1.01	0.02	Neutral
10	p.Glu10Phe	1.11	0.15	Neutral	1.11	0.15	Neutral
11	p.Pro11Asn	1.13	0.17	Neutral	1.13	0.17	Neutral
11	p.Pro11Lys	1.28	0.36	Indeterminate	1.28	0.36	Indeterminate
11	p.Pro11Thr	1.44	0.53	Indeterminate	1.44	0.53	Indeterminate
11	p.Pro11Arg	1.08	0.11	Neutral	1.08	0.11	Neutral
11	p.Pro11Ser	1.21	0.27	Indeterminate	1.21	0.27	Indeterminate
11	p.Pro11Ile	1.13	0.18	Neutral	1.13	0.18	Neutral
11	p.Pro11Met	1.07	0.09	Neutral	1.07	0.09	Neutral

11	p.Pro11His	1.12	0.17	Neutral			1.12	0.17	Neutral
11	p.Pro11Gln	0.96	-0.06	Neutral			0.96	-0.06	Neutral
11	p.Pro11Pro	1.00	0.00	Neutral			1.00	0.00	Neutral
11	p.Pro11Leu	1.12	0.16	Neutral			1.12	0.16	Neutral
11	p.Pro11Asp	1.07	0.09	Neutral			1.07	0.09	Neutral
11	p.Pro11Glu	1.01	0.01	Neutral			1.01	0.01	Neutral
11	p.Pro11Ala	1.10	0.14	Neutral			1.10	0.14	Neutral
11	p.Pro11Gly	1.20	0.26	Indeterminate			1.20	0.26	Indeterminate
11	p.Pro11Val	1.09	0.12	Neutral			1.09	0.12	Neutral
11	p.Pro11Tyr	1.22	0.28	Indeterminate			1.22	0.28	Indeterminate
11	p.Pro11Cys	1.01	0.02	Neutral			1.01	0.02	Neutral
11	p.Pro11Trp	1.31	0.39	Indeterminate			1.31	0.39	Indeterminate
11	p.Pro11Phe	1.22	0.29	Indeterminate			1.22	0.29	Indeterminate
12	p.Ser12Asn	0.92	-0.12	Neutral			0.92	-0.12	Neutral
12	p.Ser12Lys	0.71	-0.49	Neutral			0.71	-0.49	Neutral
12	p.Ser12Thr	0.76	-0.39	Neutral			0.76	-0.39	Neutral
12	p.Ser12Arg	0.84	-0.25	Neutral			0.84	-0.25	Neutral
12	p.Ser12Ser	1.00	0.00	Neutral			1.00	0.00	Neutral
12	p.Ser12Ile	0.81	-0.31	Neutral			0.81	-0.31	Neutral
12	p.Ser12Met	0.71	-0.49	Neutral			0.71	-0.49	Neutral
12	p.Ser12His	1.12	0.16	Neutral			1.12	0.16	Neutral
12	p.Ser12Gln	1.15	0.20	Neutral			1.15	0.20	Neutral
12	p.Ser12Pro	0.78	-0.36	Neutral			0.78	-0.36	Neutral
12	p.Ser12Leu	2.35	1.23	Deleterious			2.35	1.23	Deleterious
12	p.Ser12Asp	0.66	-0.59	Neutral			0.66	-0.59	Neutral
12	p.Ser12Glu	0.88	-0.18	Neutral			0.88	-0.18	Neutral
12	p.Ser12Ala	0.85	-0.23	Neutral			0.85	-0.23	Neutral
12	p.Ser12Gly	0.82	-0.29	Neutral			0.82	-0.29	Neutral
12	p.Ser12Val	1.13	0.18	Neutral			1.13	0.18	Neutral
12	p.Ser12Tyr	0.75	-0.41	Neutral			0.75	-0.41	Neutral
12	p.Ser12Cys	1.13	0.18	Neutral			1.13	0.18	Neutral
12	p.Ser12Trp	1.13	0.18	Neutral			1.13	0.18	Neutral
12	p.Ser12Phe	1.11	0.15	Neutral			1.11	0.15	Neutral
13	p.Alal3Asn	0.61	-0.72	Neutral			0.61	-0.72	Neutral
13	p.Alal3Lys	0.71	-0.49	Neutral			0.71	-0.49	Neutral
13	p.Alal3Thr	0.70	-0.51	Neutral			0.70	-0.51	Neutral
13	p.Alal3Arg	0.61	-0.72	Neutral			0.61	-0.72	Neutral
13	p.Alal3Ser	0.63	-0.66	Neutral			0.63	-0.66	Neutral
13	p.Alal3Ile	0.65	-0.61	Neutral			0.65	-0.61	Neutral
13	p.Alal3Met	1.07	0.10	Neutral			1.07	0.10	Neutral
13	p.Alal3His	0.75	-0.41	Neutral			0.75	-0.41	Neutral
13	p.Alal3Gln	0.66	-0.59	Neutral			0.66	-0.59	Neutral
13	p.Alal3Pro	0.53	-0.90	Neutral			0.53	-0.90	Neutral
13	p.Alal3Leu	0.74	-0.43	Neutral			0.74	-0.43	Neutral
13	p.Alal3Asp	0.68	-0.55	Neutral			0.68	-0.55	Neutral
13	p.Alal3Glu	0.64	-0.64	Neutral			0.64	-0.64	Neutral
13	p.Alal3Ala	1.00	0.00	Neutral			1.00	0.00	Neutral
13	p.Alal3Gly	0.57	-0.81	Neutral			0.57	-0.81	Neutral
13	p.Alal3Val	0.70	-0.51	Neutral			0.70	-0.51	Neutral
13	p.Alal3Tyr	1.03	0.04	Neutral			1.03	0.04	Neutral
13	p.Alal3Cys	0.82	-0.29	Neutral			0.82	-0.29	Neutral
13	p.Alal3Trp	0.77	-0.38	Neutral			0.77	-0.38	Neutral
13	p.Alal3Phe	0.94	-0.09	Neutral			0.94	-0.09	Neutral
14	p.Asp14Asn	1.14	0.19	Neutral			1.14	0.19	Neutral
14	p.Asp14Lys	1.10	0.14	Neutral			1.10	0.14	Neutral
14	p.Asp14Thr	0.95	-0.08	Neutral			0.95	-0.08	Neutral
14	p.Asp14Arg	1.63	0.71	Indeterminate			1.63	0.71	Indeterminate
14	p.Asp14Ser	0.92	-0.13	Neutral			0.92	-0.13	Neutral
14	p.Asp14Ile	2.30	1.20	Deleterious			2.30	1.20	Deleterious
14	p.Asp14Met	1.77	0.82	Indeterminate			1.77	0.82	Indeterminate
14	p.Asp14His	0.95	-0.07	Neutral			0.95	-0.07	Neutral
14	p.Asp14Gln	1.12	0.17	Neutral			1.12	0.17	Neutral
14	p.Asp14Pro	2.56	1.36	Deleterious			2.56	1.36	Deleterious
14	p.Asp14Leu	1.80	0.84	Indeterminate			1.80	0.84	Indeterminate
14	p.Asp14Asp	1.00	0.00	Neutral			1.00	0.00	Neutral
14	p.Asp14Glu	1.09	0.12	Neutral			1.09	0.12	Neutral
14	p.Asp14Ala	1.37	0.46	Indeterminate			1.37	0.46	Indeterminate
14	p.Asp14Gly	1.04	0.06	Neutral			1.04	0.06	Neutral
14	p.Asp14Val	2.47	1.31	Deleterious			2.47	1.31	Deleterious
14	p.Asp14Tyr	1.93	0.95	Indeterminate			1.93	0.95	Indeterminate
14	p.Asp14Cys	1.05	0.06	Neutral			1.05	0.06	Neutral
14	p.Asp14Trp	1.87	0.90	Indeterminate			1.87	0.90	Indeterminate
14	p.Asp14Phe	1.93	0.95	Indeterminate			1.93	0.95	Indeterminate
15	p.Trp15Asn	1.51	0.59	Indeterminate	0.73	-0.46	Neutral	1.12	0.16
15	p.Trp15Lys	1.37	0.46	Indeterminate	0.72	-0.48	Neutral	1.04	0.06
15	p.Trp15Thr	1.65	0.73	Indeterminate	1.03	0.04	Neutral	1.34	0.42
15	p.Trp15Arg	1.19	0.25	Indeterminate	0.65	-0.62	Neutral	0.92	-0.12
15	p.Trp15Ser	1.37	0.46	Indeterminate	0.69	-0.54	Neutral	1.03	0.04
15	p.Trp15Ile	1.03	0.05	Neutral	0.99	-0.02	Neutral	1.01	0.01
15	p.Trp15Met	1.13	0.17	Neutral	0.93	-0.10	Neutral	1.03	0.04
15	p.Trp15His	1.48	0.57	Indeterminate	1.61	0.69	Indeterminate	1.55	0.63
15	p.Trp15Gln	1.46	0.54	Indeterminate	1.13	0.18	Neutral	1.29	0.37
15	p.Trp15Pro	1.83	0.87	Indeterminate	1.46	0.55	Indeterminate	1.65	0.72
15	p.Trp15Leu	1.30	0.38	Indeterminate	1.14	0.19	Neutral	1.22	0.29
15	p.Trp15Asp	1.28	0.35	Indeterminate	1.06	0.08	Neutral	1.17	0.23
15	p.Trp15Glu	1.09	0.13	Neutral	1.11	0.15	Neutral	1.10	0.14
15	p.Trp15Ala	1.36	0.44	Indeterminate	0.77	-0.37	Neutral	1.07	0.09
15	p.Trp15Gly	1.18	0.24	Neutral	1.46	0.54	Indeterminate	1.32	0.40
15	p.Trp15Val	1.06	0.08	Neutral	0.62	-0.68	Neutral	0.84	-0.25
15	p.Trp15Tyr	1.67	0.74	Indeterminate	0.91	-0.13	Neutral	1.29	0.37
15	p.Trp15Cys	1.51	0.59	Indeterminate	0.82	-0.28	Neutral	1.17	0.22
15	p.Trp15Trp	1.00	0.00	Neutral	1.00	0.00	Neutral	1.00	0.00
15	p.Trp15Phe	1.29	0.37	Indeterminate	0.77	-0.37	Neutral	1.03	0.05
16	p.Leu16Asn	17.05	4.09	Deleterious			17.05	4.09	Deleterious
16	p.Leu16Lys	24.15	4.59	Deleterious			24.15	4.59	Deleterious
16	p.Leu16Thr	2.31	1.21	Deleterious			2.31	1.21	Deleterious
16	p.Leu16Arg	28.65	4.84	Deleterious			28.65	4.84	Deleterious
16	p.Leu16Ser	12.85	3.68	Deleterious			12.85	3.68	Deleterious
16	p.Leu16Ile	1.34	0.42	Indeterminate			1.34	0.42	Indeterminate
16	p.Leu16Met	1.18	0.24	Indeterminate			1.18	0.24	Indeterminate
16	p.Leu16His	16.82	4.07	Deleterious			16.82	4.07	Deleterious
16	p.Leu16Gln	16.71	4.06	Deleterious			16.71	4.06	Deleterious
16	p.Leu16Pro	15.82	3.98	Deleterious			15.82	3.98	Deleterious
16	p.Leu16Leu	1.00	0.00	Neutral			1.00	0.00	Neutral
16	p.Leu16Asp	24.00	4.59	Deleterious			24.00	4.59	Deleterious
16	p.Leu16Glu	21.71	4.44	Deleterious			21.71	4.44	Deleterious

16	p.Leu16Ala	4.92	2.30	Deleterious		4.92	2.30	Deleterious		
16	p.Leu16Gly	19.95	4.32	Deleterious		19.95	4.32	Deleterious		
16	p.Leu16Val	2.04	1.03	Indeterminate		2.04	1.03	Indeterminate		
16	p.Leu16Tyr	21.66	4.44	Deleterious		21.66	4.44	Deleterious		
16	p.Leu16Cys	2.04	1.03	Indeterminate		2.04	1.03	Indeterminate		
16	p.Leu16Trp	21.58	4.43	Deleterious		21.58	4.43	Deleterious		
16	p.Leu16Phe	1.48	0.56	Indeterminate		1.48	0.56	Indeterminate		
17	p.Ala17Asn	1.60	0.68	Indeterminate		1.60	0.68	Indeterminate		
17	p.Ala17Lys	36.62	5.19	Deleterious		36.62	5.19	Deleterious		
17	p.Ala17Thr	1.13	0.18	Neutral		1.13	0.18	Neutral		
17	p.Ala17Arg	39.11	5.29	Deleterious		39.11	5.29	Deleterious		
17	p.Ala17Ser	1.14	0.19	Neutral		1.14	0.19	Neutral		
17	p.Ala17Ile	1.70	0.77	Indeterminate		1.70	0.77	Indeterminate		
17	p.Ala17Met	3.32	1.73	Deleterious		3.32	1.73	Deleterious		
17	p.Ala17His	1.14	0.19	Neutral		1.14	0.19	Neutral		
17	p.Ala17Gln	3.54	1.82	Deleterious		3.54	1.82	Deleterious		
17	p.Ala17Pro	1.10	0.13	Neutral		1.10	0.13	Neutral		
17	p.Ala17Leu	6.23	2.64	Deleterious		6.23	2.64	Deleterious		
17	p.Ala17Asp	2.99	1.58	Deleterious		2.99	1.58	Deleterious		
17	p.Ala17Glu	15.21	3.93	Deleterious		15.21	3.93	Deleterious		
17	p.Ala17Ala	1.00	0.00	Neutral		1.00	0.00	Neutral		
17	p.Ala17Gly	1.01	0.01	Neutral		1.01	0.01	Neutral		
17	p.Ala17Val	1.04	0.06	Neutral		1.04	0.06	Neutral		
17	p.Ala17Tyr	4.73	2.24	Deleterious		4.73	2.24	Deleterious		
17	p.Ala17Cys	0.76	-0.40	Neutral		0.76	-0.40	Neutral		
17	p.Ala17Trp	5.41	2.43	Deleterious		5.41	2.43	Deleterious		
17	p.Ala17Phe	3.04	1.61	Deleterious		3.04	1.61	Deleterious		
18	p.Thr18Asn	2.54	1.34	Deleterious		2.54	1.34	Deleterious		
18	p.Thr18Lys	1.83	0.87	Indeterminate		1.83	0.87	Indeterminate		
18	p.Thr18Thr	1.00	0.00	Neutral		1.00	0.00	Neutral		
18	p.Thr18Arg	1.81	0.85	Indeterminate		1.81	0.85	Indeterminate		
18	p.Thr18Ser	1.45	0.53	Indeterminate		1.45	0.53	Indeterminate		
18	p.Thr18Ile	2.08	1.06	Indeterminate		2.08	1.06	Indeterminate		
18	p.Thr18Met	2.38	1.25	Deleterious		2.38	1.25	Deleterious		
18	p.Thr18His	1.36	0.44	Indeterminate		1.36	0.44	Indeterminate		
18	p.Thr18Gln	1.66	0.73	Indeterminate		1.66	0.73	Indeterminate		
18	p.Thr18Pro	11.34	3.50	Deleterious		11.34	3.50	Deleterious		
18	p.Thr18Leu	2.42	1.28	Deleterious		2.42	1.28	Deleterious		
18	p.Thr18Asp	1.66	0.73	Indeterminate		1.66	0.73	Indeterminate		
18	p.Thr18Glu	1.46	0.55	Indeterminate		1.46	0.55	Indeterminate		
18	p.Thr18Ala	2.46	1.30	Deleterious		2.46	1.30	Deleterious		
18	p.Thr18Gly	1.46	0.54	Indeterminate		1.46	0.54	Indeterminate		
18	p.Thr18Val	1.50	0.59	Indeterminate		1.50	0.59	Indeterminate		
18	p.Thr18Tyr	2.54	1.34	Deleterious		2.54	1.34	Deleterious		
18	p.Thr18Cys	1.09	0.13	Neutral		1.09	0.13	Neutral		
18	p.Thr18Trp	1.89	0.92	Indeterminate		1.89	0.92	Indeterminate		
18	p.Thr18Phe	1.44	0.52	Indeterminate		1.44	0.52	Indeterminate		
19	p.Ala19Asn	0.44	-1.20	Neutral		0.44	-1.20	Neutral		
19	p.Ala19Lys	1.07	0.10	Neutral		1.07	0.10	Neutral		
19	p.Ala19Thr	0.67	-0.57	Neutral		0.67	-0.57	Neutral		
19	p.Ala19Arg	0.97	-0.04	Neutral		0.97	-0.04	Neutral		
19	p.Ala19Ser	0.42	-1.24	Neutral		0.42	-1.24	Neutral		
19	p.Ala19Ile	0.58	-0.79	Neutral		0.58	-0.79	Neutral		
19	p.Ala19Met	0.41	-1.29	Neutral		0.41	-1.29	Neutral		
19	p.Ala19His	0.73	-0.46	Neutral		0.73	-0.46	Neutral		
19	p.Ala19Gln	0.42	-1.26	Neutral		0.42	-1.26	Neutral		
19	p.Ala19Pro	7.17	2.84	Deleterious		7.17	2.84	Deleterious		
19	p.Ala19Leu	0.38	-1.40	Neutral		0.38	-1.40	Neutral		
19	p.Ala19Asp	1.11	0.15	Neutral		1.11	0.15	Neutral		
19	p.Ala19Glu	0.50	-0.99	Neutral		0.50	-0.99	Neutral		
19	p.Ala19Ala	1.00	0.00	Neutral		1.00	0.00	Neutral		
19	p.Ala19Gly	0.46	-1.12	Neutral		0.46	-1.12	Neutral		
19	p.Ala19Val	0.54	-0.88	Neutral		0.54	-0.88	Neutral		
19	p.Ala19Tyr	0.57	-0.81	Neutral		0.57	-0.81	Neutral		
19	p.Ala19Cys	1.14	0.19	Neutral		1.14	0.19	Neutral		
19	p.Ala19Trp	0.40	-1.33	Neutral		0.40	-1.33	Neutral		
19	p.Ala19Phe	0.26	-1.96	Neutral		0.26	-1.96	Neutral		
20	p.Ala20Asn	17.14	4.10	Deleterious	21.96	4.46	Deleterious	19.55	4.29	Deleterious
20	p.Ala20Lys	21.01	4.39	Deleterious	26.93	4.75	Deleterious	23.97	4.58	Deleterious
20	p.Ala20Thr	1.70	0.77	Indeterminate	1.50	0.58	Indeterminate	1.60	0.68	Indeterminate
20	p.Ala20Arg	19.79	4.31	Deleterious	27.73	4.79	Deleterious	23.76	4.57	Deleterious
20	p.Ala20Ser	0.95	-0.07	Neutral	1.80	0.85	Indeterminate	1.38	0.46	Indeterminate
20	p.Ala20Ile	9.71	3.28	Deleterious	10.13	3.34	Deleterious	9.92	3.31	Deleterious
20	p.Ala20Met	7.13	2.83	Deleterious	8.50	3.09	Deleterious	7.81	2.97	Deleterious
20	p.Ala20His	19.43	4.28	Deleterious	27.11	4.76	Deleterious	23.27	4.54	Deleterious
20	p.Ala20Gln	21.24	4.41	Deleterious	26.35	4.72	Deleterious	23.79	4.57	Deleterious
20	p.Ala20Pro	21.60	4.43	Deleterious	25.71	4.68	Deleterious	23.65	4.56	Deleterious
20	p.Ala20Leu	7.16	2.84	Deleterious	8.21	3.04	Deleterious	7.69	2.94	Deleterious
20	p.Ala20Asp	18.97	4.25	Deleterious	25.25	4.66	Deleterious	22.11	4.47	Deleterious
20	p.Ala20Glu	20.26	4.34	Deleterious	28.11	4.81	Deleterious	24.18	4.60	Deleterious
20	p.Ala20Ala	1.00	0.00	Neutral	1.00	0.00	Neutral	1.00	0.00	Neutral
20	p.Ala20Gly	5.42	2.44	Deleterious	1.92	0.94	Indeterminate	3.67	1.88	Deleterious
20	p.Ala20Val	1.15	0.20	Neutral	1.54	0.62	Indeterminate	1.34	0.42	Indeterminate
20	p.Ala20Tyr	21.80	4.45	Deleterious	26.74	4.74	Deleterious	24.27	4.60	Deleterious
20	p.Ala20Cys	1.18	0.24	Indeterminate	1.34	0.42	Indeterminate	1.26	0.33	Indeterminate
20	p.Ala20Trp	21.50	4.43	Deleterious	27.63	4.79	Deleterious	24.57	4.62	Deleterious
20	p.Ala20Phe	19.92	4.32	Deleterious	26.72	4.74	Deleterious	23.32	4.54	Deleterious
21	p.Ala21Asn	4.93	2.30	Deleterious				4.93	2.30	Deleterious
21	p.Ala21Lys	30.37	4.92	Deleterious				30.37	4.92	Deleterious
21	p.Ala21Thr	1.48	0.57	Indeterminate				1.48	0.57	Indeterminate
21	p.Ala21Arg	12.05	3.59	Deleterious				12.05	3.59	Deleterious
21	p.Ala21Ser	1.05	0.07	Neutral				1.05	0.07	Neutral
21	p.Ala21Ile	2.45	1.29	Deleterious				2.45	1.29	Deleterious
21	p.Ala21Met	3.33	1.73	Deleterious				3.33	1.73	Deleterious
21	p.Ala21His	9.34	3.22	Deleterious				9.34	3.22	Deleterious
21	p.Ala21Gln	6.36	2.67	Deleterious				6.36	2.67	Deleterious
21	p.Ala21Pro	37.99	5.25	Deleterious				37.99	5.25	Deleterious
21	p.Ala21Leu	1.65	0.72	Indeterminate				1.65	0.72	Indeterminate
21	p.Ala21Asp	23.39	4.55	Deleterious				23.39	4.55	Deleterious
21	p.Ala21Glu	9.77	3.29	Deleterious				9.77	3.29	Deleterious
21	p.Ala21Ala	1.00	0.00	Neutral				1.00	0.00	Neutral
21	p.Ala21Gly	0.97	-0.04	Neutral				0.97	-0.04	Neutral
21	p.Ala21Val	1.17	0.23	Neutral				1.17	0.23	Neutral
21	p.Ala21Tyr	7.25	2.86	Deleterious				7.25	2.86	Deleterious
21	p.Ala21Cys	1.05	0.07	Neutral				1.05	0.07	Neutral
21	p.Ala21Trp	7.68	2.94	Deleterious				7.68	2.94	Deleterious

21	p.Ala21Phe	6.02	2.59	Deleterious			6.02	2.59	Deleterious	
22	p.Arg22Asn	0.38	-1.41	Neutral			0.38	-1.41	Neutral	
22	p.Arg22Lys	0.99	-0.01	Neutral			0.99	-0.01	Neutral	
22	p.Arg22Thr	2.13	1.09	Deleterious			2.13	1.09	Deleterious	
22	p.Arg22Arg	1.00	0.00	Neutral			1.00	0.00	Neutral	
22	p.Arg22Ser	1.50	0.58	Indeterminate			1.50	0.58	Indeterminate	
22	p.Arg22Ile	0.86	-0.21	Neutral			0.86	-0.21	Neutral	
22	p.Arg22Met	1.40	0.49	Indeterminate			1.40	0.49	Indeterminate	
22	p.Arg22His	0.21	-2.22	Neutral			0.21	-2.22	Neutral	
22	p.Arg22Gln	0.39	-1.36	Neutral			0.39	-1.36	Neutral	
22	p.Arg22Pro	6.72	2.75	Deleterious			6.72	2.75	Deleterious	
22	p.Arg22Leu	0.54	-0.89	Neutral			0.54	-0.89	Neutral	
22	p.Arg22Asp	0.90	-0.15	Neutral			0.90	-0.15	Neutral	
22	p.Arg22Glu	0.31	-1.70	Neutral			0.31	-1.70	Neutral	
22	p.Arg22Ala	0.40	-1.31	Neutral			0.40	-1.31	Neutral	
22	p.Arg22Gly	3.32	1.73	Deleterious			3.32	1.73	Deleterious	
22	p.Arg22Val	0.51	-0.97	Neutral			0.51	-0.97	Neutral	
22	p.Arg22Tyr	0.97	-0.04	Neutral			0.97	-0.04	Neutral	
22	p.Arg22Cys	0.22	-2.18	Neutral			0.22	-2.18	Neutral	
22	p.Arg22Trp	1.58	0.66	Indeterminate			1.58	0.66	Indeterminate	
22	p.Arg22Phe	1.80	0.85	Indeterminate			1.80	0.85	Indeterminate	
23	p.Gly23Asn	2.46	1.30	Deleterious			2.46	1.30	Deleterious	
23	p.Gly23Lys	20.06	4.33	Deleterious			20.06	4.33	Deleterious	
23	p.Gly23Thr	20.30	4.34	Deleterious			20.30	4.34	Deleterious	
23	p.Gly23Arg	18.67	4.22	Deleterious			18.67	4.22	Deleterious	
23	p.Gly23Ser	3.96	1.99	Deleterious			3.96	1.99	Deleterious	
23	p.Gly23Ile	23.20	4.54	Deleterious			23.20	4.54	Deleterious	
23	p.Gly23Met	19.90	4.31	Deleterious			19.90	4.31	Deleterious	
23	p.Gly23His	18.89	4.24	Deleterious			18.89	4.24	Deleterious	
23	p.Gly23Gln	18.28	4.19	Deleterious			18.28	4.19	Deleterious	
23	p.Gly23Pro	19.40	4.28	Deleterious			19.40	4.28	Deleterious	
23	p.Gly23Leu	22.55	4.50	Deleterious			22.55	4.50	Deleterious	
23	p.Gly23Asp	14.29	3.84	Deleterious			14.29	3.84	Deleterious	
23	p.Gly23Glu	21.21	4.41	Deleterious			21.21	4.41	Deleterious	
23	p.Gly23Ala	1.27	0.35	Indeterminate			1.27	0.35	Indeterminate	
23	p.Gly23Gly	1.00	0.00	Neutral			1.00	0.00	Neutral	
23	p.Gly23Val	19.64	4.30	Deleterious			19.64	4.30	Deleterious	
23	p.Gly23Tyr	20.02	4.32	Deleterious			20.02	4.32	Deleterious	
23	p.Gly23Cys	13.02	3.70	Deleterious			13.02	3.70	Deleterious	
23	p.Gly23Trp	23.15	4.53	Deleterious			23.15	4.53	Deleterious	
23	p.Gly23Phe	20.81	4.38	Deleterious			20.81	4.38	Deleterious	
24	p.Arg24Asn	0.74	-0.44	Neutral	1.02	0.02	Neutral	0.88	-0.19	Neutral
24	p.Arg24Lys	0.60	-0.75	Neutral	1.18	0.24	Neutral	0.89	-0.17	Neutral
24	p.Arg24Thr	0.72	-0.47	Neutral	1.28	0.36	Indeterminate	1.00	0.00	Neutral
24	p.Arg24Arg	1.00	0.00	Neutral	1.00	0.00	Neutral	1.00	0.00	Neutral
24	p.Arg24Ser	0.58	-0.79	Neutral	0.98	-0.03	Neutral	0.78	-0.36	Neutral
24	p.Arg24Ile	0.76	-0.40	Neutral	0.90	-0.16	Neutral	0.83	-0.27	Neutral
24	p.Arg24Met	0.90	-0.15	Neutral	1.08	0.12	Neutral	0.99	-0.01	Neutral
24	p.Arg24His	0.53	-0.93	Neutral	0.83	-0.27	Neutral	0.68	-0.56	Neutral
24	p.Arg24Gln	1.53	0.62	Indeterminate	1.60	0.68	Indeterminate	1.57	0.65	Indeterminate
24	p.Arg24Pro	9.29	3.22	Deleterious	7.17	2.84	Deleterious	8.23	3.04	Deleterious
24	p.Arg24Leu	0.82	-0.29	Neutral	1.06	0.08	Neutral	0.94	-0.10	Neutral
24	p.Arg24Asp	0.74	-0.43	Neutral	0.85	-0.24	Neutral	0.79	-0.33	Neutral
24	p.Arg24Glu	0.67	-0.59	Neutral	1.14	0.18	Neutral	0.90	-0.15	Neutral
24	p.Arg24Ala	0.53	-0.91	Neutral	0.85	-0.24	Neutral	0.69	-0.54	Neutral
24	p.Arg24Gly	0.69	-0.54	Neutral	1.23	0.30	Indeterminate	0.96	-0.06	Neutral
24	p.Arg24Val	0.67	-0.57	Neutral	1.02	0.02	Neutral	0.85	-0.24	Neutral
24	p.Arg24Tyr	0.66	-0.61	Neutral	1.14	0.19	Neutral	0.90	-0.16	Neutral
24	p.Arg24Cys	0.84	-0.25	Neutral	0.75	-0.42	Neutral	0.79	-0.33	Neutral
24	p.Arg24Trp	0.95	-0.07	Neutral	1.12	0.16	Neutral	1.04	0.05	Neutral
24	p.Arg24Phe	0.82	-0.29	Neutral	0.94	-0.09	Neutral	0.88	-0.19	Neutral
25	p.Val25Asn	1.23	0.30	Indeterminate			1.23	0.30	Indeterminate	
25	p.Val25Lys	1.86	0.89	Indeterminate			1.86	0.89	Indeterminate	
25	p.Val25Thr	1.00	0.00	Neutral			1.00	0.00	Neutral	
25	p.Val25Arg	1.37	0.45	Indeterminate			1.37	0.45	Indeterminate	
25	p.Val25Ser	0.88	-0.19	Neutral			0.88	-0.19	Neutral	
25	p.Val25Ile	0.83	-0.27	Neutral			0.83	-0.27	Neutral	
25	p.Val25Met	2.08	1.06	Indeterminate			2.08	1.06	Indeterminate	
25	p.Val25His	0.78	-0.36	Neutral			0.78	-0.36	Neutral	
25	p.Val25Gln	0.76	-0.39	Neutral			0.76	-0.39	Neutral	
25	p.Val25Pro	0.45	-1.14	Neutral			0.45	-1.14	Neutral	
25	p.Val25Leu	0.59	-0.76	Neutral			0.59	-0.76	Neutral	
25	p.Val25Asp	2.01	1.01	Indeterminate			2.01	1.01	Indeterminate	
25	p.Val25Glu	0.89	-0.18	Neutral			0.89	-0.18	Neutral	
25	p.Val25Ala	6.36	2.67	Deleterious			6.36	2.67	Deleterious	
25	p.Val25Gly	2.04	1.03	Indeterminate			2.04	1.03	Indeterminate	
25	p.Val25Val	1.00	0.00	Neutral			1.00	0.00	Neutral	
25	p.Val25Tyr	2.88	1.52	Deleterious			2.88	1.52	Deleterious	
25	p.Val25Cys	0.61	-0.70	Neutral			0.61	-0.70	Neutral	
25	p.Val25Trp	1.21	0.27	Indeterminate			1.21	0.27	Indeterminate	
25	p.Val25Phe	1.14	0.19	Neutral			1.14	0.19	Neutral	
26	p.Glu26Asn	0.81	-0.30	Neutral			0.81	-0.30	Neutral	
26	p.Glu26Lys	0.82	-0.29	Neutral			0.82	-0.29	Neutral	
26	p.Glu26Thr	0.92	-0.13	Neutral			0.92	-0.13	Neutral	
26	p.Glu26Arg	0.90	-0.16	Neutral			0.90	-0.16	Neutral	
26	p.Glu26Ser	1.19	0.25	Indeterminate			1.19	0.25	Indeterminate	
26	p.Glu26Ile	0.95	-0.07	Neutral			0.95	-0.07	Neutral	
26	p.Glu26Met	0.86	-0.21	Neutral			0.86	-0.21	Neutral	
26	p.Glu26His	1.07	0.09	Neutral			1.07	0.09	Neutral	
26	p.Glu26Gln	1.05	0.07	Neutral			1.05	0.07	Neutral	
26	p.Glu26Pro	1.06	0.08	Neutral			1.06	0.08	Neutral	
26	p.Glu26Leu	0.84	-0.25	Neutral			0.84	-0.25	Neutral	
26	p.Glu26Asp	1.00	0.00	Neutral			1.00	0.00	Neutral	
26	p.Glu26Glu	1.00	0.00	Neutral			1.00	0.00	Neutral	
26	p.Glu26Ala	1.07	0.10	Neutral			1.07	0.10	Neutral	
26	p.Glu26Gly	1.00	0.01	Neutral			1.00	0.01	Neutral	
26	p.Glu26Val	0.98	-0.03	Neutral			0.98	-0.03	Neutral	
26	p.Glu26Tyr	1.12	0.16	Neutral			1.12	0.16	Neutral	
26	p.Glu26Cys	0.95	-0.08	Neutral			0.95	-0.08	Neutral	
26	p.Glu26Trp	0.99	-0.01	Neutral			0.99	-0.01	Neutral	
26	p.Glu26Phe	1.04	0.05	Neutral			1.04	0.05	Neutral	
27	p.Glu27Asn	0.36	-1.47	Neutral	0.99	-0.01	Neutral	0.68	-0.56	Neutral
27	p.Glu27Lys	0.94	-0.09	Neutral	0.99	-0.02	Neutral	0.96	-0.05	Neutral
27	p.Glu27Thr	1.69	0.76	Indeterminate	1.13	0.17	Neutral	1.41	0.50	Indeterminate
27	p.Glu27Arg	0.95	-0.08	Neutral	1.09	0.13	Neutral	1.02	0.03	Neutral
27	p.Glu27Ser	0.76	-0.40	Neutral	0.99	-0.02	Neutral	0.87	-0.20	Neutral

37	p.Leu37Cys	0.84	-0.24	Neutral	0.84	-0.24	Neutral
37	p.Leu37Trp	6.84	2.77	Deleterious	6.84	2.77	Deleterious
37	p.Leu37Phe	0.77	-0.37	Neutral	0.77	-0.37	Neutral
38	p.Pro38Asn	3.11	1.64	Deleterious	3.11	1.64	Deleterious
38	p.Pro38Lys	3.68	1.88	Deleterious	3.68	1.88	Deleterious
38	p.Pro38Thr	1.34	0.42	Indeterminate	1.34	0.42	Indeterminate
38	p.Pro38Arg	5.04	2.33	Deleterious	5.04	2.33	Deleterious
38	p.Pro38Ser	1.73	0.79	Indeterminate	1.73	0.79	Indeterminate
38	p.Pro38Ile	1.77	0.82	Indeterminate	1.77	0.82	Indeterminate
38	p.Pro38Met	2.30	1.20	Deleterious	2.30	1.20	Deleterious
38	p.Pro38His	3.80	1.92	Deleterious	3.80	1.92	Deleterious
38	p.Pro38Gln	4.08	2.03	Deleterious	4.08	2.03	Deleterious
38	p.Pro38Pro	1.00	0.00	Neutral	1.00	0.00	Neutral
38	p.Pro38Leu	3.22	1.69	Deleterious	3.22	1.69	Deleterious
38	p.Pro38Asp	20.44	4.35	Deleterious	20.44	4.35	Deleterious
38	p.Pro38Glu	2.65	1.41	Deleterious	2.65	1.41	Deleterious
38	p.Pro38Ala	5.59	2.48	Deleterious	5.59	2.48	Deleterious
38	p.Pro38Gly	0.99	-0.02	Neutral	0.99	-0.02	Neutral
38	p.Pro38Val	1.02	0.03	Neutral	1.02	0.03	Neutral
38	p.Pro38Tyr	3.40	1.77	Deleterious	3.40	1.77	Deleterious
38	p.Pro38Cys	0.75	-0.41	Neutral	0.75	-0.41	Neutral
38	p.Pro38Trp	31.11	4.96	Deleterious	31.11	4.96	Deleterious
38	p.Pro38Phe	4.51	2.17	Deleterious	4.51	2.17	Deleterious
39	p.Asn39Asn	1.00	0.00	Neutral	1.00	0.00	Neutral
39	p.Asn39Lys	2.13	1.09	Deleterious	2.13	1.09	Deleterious
39	p.Asn39Thr	0.63	-0.66	Neutral	0.63	-0.66	Neutral
39	p.Asn39Arg	1.12	0.16	Neutral	1.12	0.16	Neutral
39	p.Asn39Ser	1.17	0.22	Neutral	1.17	0.22	Neutral
39	p.Asn39Ile	1.45	0.53	Indeterminate	1.45	0.53	Indeterminate
39	p.Asn39Met	2.20	1.14	Deleterious	2.20	1.14	Deleterious
39	p.Asn39His	0.71	-0.50	Neutral	0.71	-0.50	Neutral
39	p.Asn39Gln	0.93	-0.10	Neutral	0.93	-0.10	Neutral
39	p.Asn39Pro	14.46	3.85	Deleterious	14.46	3.85	Deleterious
39	p.Asn39Leu	4.17	2.06	Deleterious	4.17	2.06	Deleterious
39	p.Asn39Asp	1.04	0.06	Neutral	1.04	0.06	Neutral
39	p.Asn39Glu	1.18	0.24	Indeterminate	1.18	0.24	Indeterminate
39	p.Asn39Ala	1.30	0.37	Indeterminate	1.30	0.37	Indeterminate
39	p.Asn39Gly	0.98	-0.03	Neutral	0.98	-0.03	Neutral
39	p.Asn39Val	1.33	0.41	Indeterminate	1.33	0.41	Indeterminate
39	p.Asn39Tyr	0.89	-0.17	Neutral	0.89	-0.17	Neutral
39	p.Asn39Cys	4.55	2.19	Deleterious	4.55	2.19	Deleterious
39	p.Asn39Trp	1.64	0.71	Indeterminate	1.64	0.71	Indeterminate
39	p.Asn39Phe	8.47	3.08	Deleterious	8.47	3.08	Deleterious
40	p.Ala40Asn	1.37	0.45	Indeterminate	1.37	0.45	Indeterminate
40	p.Ala40Lys	1.11	0.15	Neutral	1.11	0.15	Neutral
40	p.Ala40Thr	7.75	2.95	Deleterious	7.75	2.95	Deleterious
40	p.Ala40Arg	1.00	0.00	Neutral	1.00	0.00	Neutral
40	p.Ala40Ser	0.73	-0.46	Neutral	0.73	-0.46	Neutral
40	p.Ala40Ile	1.12	0.16	Neutral	1.12	0.16	Neutral
40	p.Ala40Met	0.60	-0.73	Neutral	0.60	-0.73	Neutral
40	p.Ala40His	0.74	-0.44	Neutral	0.74	-0.44	Neutral
40	p.Ala40Gln	0.61	-0.72	Neutral	0.61	-0.72	Neutral
40	p.Ala40Pro	1.50	0.58	Indeterminate	1.50	0.58	Indeterminate
40	p.Ala40Leu	3.93	1.97	Deleterious	3.93	1.97	Deleterious
40	p.Ala40Asp	1.66	0.73	Indeterminate	1.66	0.73	Indeterminate
40	p.Ala40Glu	0.79	-0.35	Neutral	0.79	-0.35	Neutral
40	p.Ala40Ala	1.00	0.00	Neutral	1.00	0.00	Neutral
40	p.Ala40Gly	1.03	0.05	Neutral	1.03	0.05	Neutral
40	p.Ala40Val	1.38	0.47	Indeterminate	1.38	0.47	Indeterminate
40	p.Ala40Tyr	0.73	-0.44	Neutral	0.73	-0.44	Neutral
40	p.Ala40Cys	1.01	0.01	Neutral	1.01	0.01	Neutral
40	p.Ala40Trp	1.17	0.22	Neutral	1.17	0.22	Neutral
40	p.Ala40Phe	1.12	0.16	Neutral	1.12	0.16	Neutral
41	p.Pro41Asn	0.92	-0.12	Neutral	0.92	-0.12	Neutral
41	p.Pro41Lys	1.28	0.35	Indeterminate	1.28	0.35	Indeterminate
41	p.Pro41Thr	1.03	0.04	Neutral	1.03	0.04	Neutral
41	p.Pro41Arg	2.29	1.20	Deleterious	2.29	1.20	Deleterious
41	p.Pro41Ser	0.97	-0.05	Neutral	0.97	-0.05	Neutral
41	p.Pro41Ile	1.61	0.68	Indeterminate	1.61	0.68	Indeterminate
41	p.Pro41Met	0.78	-0.37	Neutral	0.78	-0.37	Neutral
41	p.Pro41His	1.79	0.84	Indeterminate	1.79	0.84	Indeterminate
41	p.Pro41Gln	1.29	0.37	Indeterminate	1.29	0.37	Indeterminate
41	p.Pro41Pro	1.00	0.00	Neutral	1.00	0.00	Neutral
41	p.Pro41Leu	0.79	-0.34	Neutral	0.79	-0.34	Neutral
41	p.Pro41Asp	1.28	0.35	Indeterminate	1.28	0.35	Indeterminate
41	p.Pro41Glu	0.90	-0.15	Neutral	0.90	-0.15	Neutral
41	p.Pro41Ala	1.00	0.01	Neutral	1.00	0.01	Neutral
41	p.Pro41Gly	1.06	0.09	Neutral	1.06	0.09	Neutral
41	p.Pro41Val	1.09	0.13	Neutral	1.09	0.13	Neutral
41	p.Pro41Tyr	2.10	1.07	Indeterminate	2.10	1.07	Indeterminate
41	p.Pro41Cys	1.32	0.40	Indeterminate	1.32	0.40	Indeterminate
41	p.Pro41Trp	1.43	0.52	Indeterminate	1.43	0.52	Indeterminate
41	p.Pro41Phe	1.52	0.61	Indeterminate	1.52	0.61	Indeterminate
42	p.Asn42Asn	1.00	0.00	Neutral	1.00	0.00	Neutral
42	p.Asn42Lys	12.54	3.65	Deleterious	12.54	3.65	Deleterious
42	p.Asn42Thr	1.32	0.41	Indeterminate	1.32	0.41	Indeterminate
42	p.Asn42Arg	11.65	3.54	Deleterious	11.65	3.54	Deleterious
42	p.Asn42Ser	1.22	0.29	Indeterminate	1.22	0.29	Indeterminate
42	p.Asn42Ile	11.57	3.53	Deleterious	11.57	3.53	Deleterious
42	p.Asn42Met	9.77	3.29	Deleterious	9.77	3.29	Deleterious
42	p.Asn42His	7.33	2.87	Deleterious	7.33	2.87	Deleterious
42	p.Asn42Gln	7.10	2.83	Deleterious	7.10	2.83	Deleterious
42	p.Asn42Pro	10.83	3.44	Deleterious	10.83	3.44	Deleterious
42	p.Asn42Leu	11.43	3.51	Deleterious	11.43	3.51	Deleterious
42	p.Asn42Asp	1.61	0.69	Indeterminate	1.61	0.69	Indeterminate
42	p.Asn42Glu	12.48	3.64	Deleterious	12.48	3.64	Deleterious
42	p.Asn42Ala	1.15	0.20	Neutral	1.15	0.20	Neutral
42	p.Asn42Gly	0.94	-0.09	Neutral	0.94	-0.09	Neutral
42	p.Asn42Val	9.99	3.32	Deleterious	9.99	3.32	Deleterious
42	p.Asn42Tyr	11.87	3.57	Deleterious	11.87	3.57	Deleterious
42	p.Asn42Cys	1.48	0.57	Indeterminate	1.48	0.57	Indeterminate
42	p.Asn42Trp	14.65	3.87	Deleterious	14.65	3.87	Deleterious
42	p.Asn42Phe	12.61	3.66	Deleterious	12.61	3.66	Deleterious
43	p.Ser43Asn	1.10	0.14	Neutral	1.10	0.14	Neutral
43	p.Ser43Lys	1.04	0.06	Neutral	1.04	0.06	Neutral
43	p.Ser43Thr	0.97	-0.04	Neutral	0.97	-0.04	Neutral

43	p.Ser43Arg	0.99	-0.01	Neutral			0.99	-0.01	Neutral	
43	p.Ser43Ser	1.00	0.00	Neutral			1.00	0.00	Neutral	
43	p.Ser43Ile	1.25	0.32	Indeterminate			1.25	0.32	Indeterminate	
43	p.Ser43Met	1.09	0.13	Neutral			1.09	0.13	Neutral	
43	p.Ser43His	1.00	-0.01	Neutral			1.00	-0.01	Neutral	
43	p.Ser43Gln	1.00	0.00	Neutral			1.00	0.00	Neutral	
43	p.Ser43Pro	0.99	-0.01	Neutral			0.99	-0.01	Neutral	
43	p.Ser43Leu	1.06	0.08	Neutral			1.06	0.08	Neutral	
43	p.Ser43Asp	1.09	0.12	Neutral			1.09	0.12	Neutral	
43	p.Ser43Glu	1.02	0.03	Neutral			1.02	0.03	Neutral	
43	p.Ser43Ala	0.97	-0.05	Neutral			0.97	-0.05	Neutral	
43	p.Ser43Gly	0.94	-0.08	Neutral			0.94	-0.08	Neutral	
43	p.Ser43Val	1.09	0.13	Neutral			1.09	0.13	Neutral	
43	p.Ser43Tyr	1.07	0.10	Neutral			1.07	0.10	Neutral	
43	p.Ser43Cys	1.06	0.08	Neutral			1.06	0.08	Neutral	
43	p.Ser43Trp	1.11	0.15	Neutral			1.11	0.15	Neutral	
43	p.Ser43Phe	1.05	0.08	Neutral			1.05	0.08	Neutral	
44	p.Tyr44Asn	1.21	0.28	Indeterminate			1.21	0.28	Indeterminate	
44	p.Tyr44Lys	1.21	0.27	Indeterminate			1.21	0.27	Indeterminate	
44	p.Tyr44Thr	0.99	-0.02	Neutral			0.99	-0.02	Neutral	
44	p.Tyr44Arg	1.03	0.04	Neutral			1.03	0.04	Neutral	
44	p.Tyr44Ser	1.09	0.12	Neutral			1.09	0.12	Neutral	
44	p.Tyr44Ile	1.05	0.07	Neutral			1.05	0.07	Neutral	
44	p.Tyr44Met	1.09	0.12	Neutral			1.09	0.12	Neutral	
44	p.Tyr44His	1.10	0.14	Neutral			1.10	0.14	Neutral	
44	p.Tyr44Gln	1.28	0.36	Indeterminate			1.28	0.36	Indeterminate	
44	p.Tyr44Pro	2.30	1.20	Deleterious			2.30	1.20	Deleterious	
44	p.Tyr44Leu	1.09	0.13	Neutral			1.09	0.13	Neutral	
44	p.Tyr44Asp	1.24	0.31	Indeterminate			1.24	0.31	Indeterminate	
44	p.Tyr44Glu	1.40	0.48	Indeterminate			1.40	0.48	Indeterminate	
44	p.Tyr44Ala	1.82	0.87	Indeterminate			1.82	0.87	Indeterminate	
44	p.Tyr44Gly	1.38	0.46	Indeterminate			1.38	0.46	Indeterminate	
44	p.Tyr44Val	1.09	0.13	Neutral			1.09	0.13	Neutral	
44	p.Tyr44Tyr	1.00	0.00	Neutral			1.00	0.00	Neutral	
44	p.Tyr44Cys	0.97	-0.05	Neutral			0.97	-0.05	Neutral	
44	p.Tyr44Trp	1.10	0.14	Neutral			1.10	0.14	Neutral	
44	p.Tyr44Phe	1.05	0.07	Neutral			1.05	0.07	Neutral	
45	p.Gly45Asn	0.71	-0.49	Neutral	1.16	0.21	Neutral	0.93	-0.10	Neutral
45	p.Gly45Lys	1.34	0.42	Indeterminate	1.14	0.19	Neutral	1.24	0.31	Indeterminate
45	p.Gly45Thr	0.64	-0.64	Neutral	1.13	0.17	Neutral	0.88	-0.18	Neutral
45	p.Gly45Arg	0.96	-0.05	Neutral	1.11	0.16	Neutral	1.04	0.06	Neutral
45	p.Gly45Ser	1.93	0.95	Indeterminate	1.09	0.12	Neutral	1.51	0.59	Indeterminate
45	p.Gly45Ile	1.92	0.94	Indeterminate	1.20	0.27	Indeterminate	1.56	0.65	Indeterminate
45	p.Gly45Met	1.24	0.31	Indeterminate	1.12	0.16	Neutral	1.18	0.24	Neutral
45	p.Gly45His	1.10	0.14	Neutral	1.12	0.17	Neutral	1.11	0.15	Neutral
45	p.Gly45Gln	0.72	-0.48	Neutral	1.02	0.04	Neutral	0.87	-0.20	Neutral
45	p.Gly45Pro	49.14	5.62	Deleterious	4.40	2.14	Deleterious	26.77	4.74	Deleterious
45	p.Gly45Leu	1.15	0.20	Neutral	1.11	0.15	Neutral	1.13	0.17	Neutral
45	p.Gly45Asp	0.71	-0.48	Neutral	1.05	0.07	Neutral	0.88	-0.18	Neutral
45	p.Gly45Glu	1.09	0.12	Neutral	1.08	0.11	Neutral	1.08	0.11	Neutral
45	p.Gly45Ala	0.63	-0.66	Neutral	1.13	0.18	Neutral	0.88	-0.18	Neutral
45	p.Gly45Gly	1.00	0.00	Neutral	1.00	0.00	Neutral	1.00	0.00	Neutral
45	p.Gly45Val	1.91	0.93	Indeterminate	1.27	0.34	Indeterminate	1.59	0.67	Indeterminate
45	p.Gly45Tyr	0.73	-0.46	Neutral	1.26	0.33	Indeterminate	0.99	-0.01	Neutral
45	p.Gly45Cys	0.85	-0.23	Neutral	1.09	0.13	Neutral	0.97	-0.04	Neutral
45	p.Gly45Trp	1.04	0.05	Neutral	1.24	0.31	Indeterminate	1.14	0.19	Neutral
45	p.Gly45Phe	0.90	-0.16	Neutral	1.02	0.03	Neutral	0.96	-0.06	Neutral
46	p.Arg46Asn	0.92	-0.13	Neutral			0.92	-0.13	Neutral	
46	p.Arg46Lys	0.79	-0.34	Neutral			0.79	-0.34	Neutral	
46	p.Arg46Thr	2.61	1.38	Deleterious			2.61	1.38	Deleterious	
46	p.Arg46Arg	1.00	0.00	Neutral			1.00	0.00	Neutral	
46	p.Arg46Ser	0.85	-0.23	Neutral			0.85	-0.23	Neutral	
46	p.Arg46Ile	3.54	1.82	Deleterious			3.54	1.82	Deleterious	
46	p.Arg46Met	1.31	0.39	Indeterminate			1.31	0.39	Indeterminate	
46	p.Arg46His	0.79	-0.34	Neutral			0.79	-0.34	Neutral	
46	p.Arg46Gln	1.54	0.62	Indeterminate			1.54	0.62	Indeterminate	
46	p.Arg46Pro	17.80	4.15	Deleterious			17.80	4.15	Deleterious	
46	p.Arg46Leu	1.44	0.53	Indeterminate			1.44	0.53	Indeterminate	
46	p.Arg46Asp	5.92	2.56	Deleterious			5.92	2.56	Deleterious	
46	p.Arg46Glu	3.02	1.59	Deleterious			3.02	1.59	Deleterious	
46	p.Arg46Ala	1.39	0.48	Indeterminate			1.39	0.48	Indeterminate	
46	p.Arg46Gly	1.36	0.44	Indeterminate			1.36	0.44	Indeterminate	
46	p.Arg46Val	1.88	0.91	Indeterminate			1.88	0.91	Indeterminate	
46	p.Arg46Tyr	1.75	0.81	Indeterminate			1.75	0.81	Indeterminate	
46	p.Arg46Cys	1.36	0.44	Indeterminate			1.36	0.44	Indeterminate	
46	p.Arg46Trp	0.81	-0.30	Neutral			0.81	-0.30	Neutral	
46	p.Arg46Phe	1.04	0.05	Neutral			1.04	0.05	Neutral	
47	p.Arg47Asn	0.91	-0.13	Neutral			0.91	-0.13	Neutral	
47	p.Arg47Lys	0.99	-0.01	Neutral			0.99	-0.01	Neutral	
47	p.Arg47Thr	0.99	-0.02	Neutral			0.99	-0.02	Neutral	
47	p.Arg47Arg	1.00	0.00	Neutral			1.00	0.00	Neutral	
47	p.Arg47Ser	1.32	0.41	Indeterminate			1.32	0.41	Indeterminate	
47	p.Arg47Ile	1.04	0.05	Neutral			1.04	0.05	Neutral	
47	p.Arg47Met	1.06	0.08	Neutral			1.06	0.08	Neutral	
47	p.Arg47His	1.06	0.09	Neutral			1.06	0.09	Neutral	
47	p.Arg47Gln	1.50	0.59	Indeterminate			1.50	0.59	Indeterminate	
47	p.Arg47Pro	1.60	0.67	Indeterminate			1.60	0.67	Indeterminate	
47	p.Arg47Leu	0.86	-0.21	Neutral			0.86	-0.21	Neutral	
47	p.Arg47Asp	3.53	1.82	Deleterious			3.53	1.82	Deleterious	
47	p.Arg47Glu	1.27	0.35	Indeterminate			1.27	0.35	Indeterminate	
47	p.Arg47Ala	0.99	-0.01	Neutral			0.99	-0.01	Neutral	
47	p.Arg47Gly	1.42	0.51	Indeterminate			1.42	0.51	Indeterminate	
47	p.Arg47Val	0.97	-0.04	Neutral			0.97	-0.04	Neutral	
47	p.Arg47Tyr	1.14	0.19	Neutral			1.14	0.19	Neutral	
47	p.Arg47Cys	0.89	-0.18	Neutral			0.89	-0.18	Neutral	
47	p.Arg47Trp	1.20	0.26	Indeterminate			1.20	0.26	Indeterminate	
47	p.Arg47Phe	0.89	-0.17	Neutral			0.89	-0.17	Neutral	
48	p.Pro48Asn	13.23	3.73	Deleterious			13.23	3.73	Deleterious	
48	p.Pro48Lys	15.42	3.95	Deleterious			15.42	3.95	Deleterious	
48	p.Pro48Thr	2.13	1.09	Deleterious			2.13	1.09	Deleterious	
48	p.Pro48Arg	13.40	3.74	Deleterious			13.40	3.74	Deleterious	
48	p.Pro48Ser	1.50	0.58	Indeterminate			1.50	0.58	Indeterminate	
48	p.Pro48Ile	7.83	2.97	Deleterious			7.83	2.97	Deleterious	
48	p.Pro48Met	11.91	3.57	Deleterious			11.91	3.57	Deleterious	
48	p.Pro48His	11.54	3.53	Deleterious			11.54	3.53	Deleterious	
48	p.Pro48Gln	14.93	3.90	Deleterious			14.93	3.90	Deleterious	

48	p.Pro48Pro	1.00	0.00	Neutral	1.00	0.00	Neutral
48	p.Pro48Leu	17.50	4.13	Deleterious	17.50	4.13	Deleterious
48	p.Pro48Asp	17.91	4.16	Deleterious	17.91	4.16	Deleterious
48	p.Pro48Glu	16.63	4.06	Deleterious	16.63	4.06	Deleterious
48	p.Pro48Ala	0.75	-0.42	Neutral	0.75	-0.42	Neutral
48	p.Pro48Gly	2.08	1.05	Indeterminate	2.08	1.05	Indeterminate
48	p.Pro48Val	2.16	1.11	Deleterious	2.16	1.11	Deleterious
48	p.Pro48Tyr	18.13	4.18	Deleterious	18.13	4.18	Deleterious
48	p.Pro48Cys	2.37	1.25	Deleterious	2.37	1.25	Deleterious
48	p.Pro48Trp	17.96	4.17	Deleterious	17.96	4.17	Deleterious
48	p.Pro48Phe	15.06	3.91	Deleterious	15.06	3.91	Deleterious
49	p.Ile49Asn	6.56	2.71	Deleterious	6.56	2.71	Deleterious
49	p.Ile49Lys	8.49	3.09	Deleterious	8.49	3.09	Deleterious
49	p.Ile49Thr	2.32	1.21	Deleterious	2.32	1.21	Deleterious
49	p.Ile49Arg	7.54	2.91	Deleterious	7.54	2.91	Deleterious
49	p.Ile49Ser	4.51	2.17	Deleterious	4.51	2.17	Deleterious
49	p.Ile49Ile	1.00	0.00	Neutral	1.00	0.00	Neutral
49	p.Ile49Met	1.09	0.12	Neutral	1.09	0.12	Neutral
49	p.Ile49His	4.93	2.30	Deleterious	4.93	2.30	Deleterious
49	p.Ile49Gln	3.98	1.99	Deleterious	3.98	1.99	Deleterious
49	p.Ile49Pro	7.18	2.84	Deleterious	7.18	2.84	Deleterious
49	p.Ile49Leu	0.97	-0.05	Neutral	0.97	-0.05	Neutral
49	p.Ile49Asp	9.18	3.20	Deleterious	9.18	3.20	Deleterious
49	p.Ile49Glu	8.40	3.07	Deleterious	8.40	3.07	Deleterious
49	p.Ile49Ala	2.27	1.19	Deleterious	2.27	1.19	Deleterious
49	p.Ile49Gly	8.88	3.15	Deleterious	8.88	3.15	Deleterious
49	p.Ile49Val	1.09	0.12	Neutral	1.09	0.12	Neutral
49	p.Ile49Tyr	6.77	2.76	Deleterious	6.77	2.76	Deleterious
49	p.Ile49Cys	1.85	0.89	Indeterminate	1.85	0.89	Indeterminate
49	p.Ile49Trp	7.82	2.97	Deleterious	7.82	2.97	Deleterious
49	p.Ile49Phe	2.33	1.22	Deleterious	2.33	1.22	Deleterious
50	p.Gln50Asn	1.33	0.41	Indeterminate	1.33	0.41	Indeterminate
50	p.Gln50Lys	12.74	3.67	Deleterious	12.74	3.67	Deleterious
50	p.Gln50Thr	1.26	0.33	Indeterminate	1.26	0.33	Indeterminate
50	p.Gln50Arg	17.01	4.09	Deleterious	17.01	4.09	Deleterious
50	p.Gln50Ser	1.18	0.24	Indeterminate	1.18	0.24	Indeterminate
50	p.Gln50Ile	4.65	2.22	Deleterious	4.65	2.22	Deleterious
50	p.Gln50Met	1.04	0.05	Neutral	1.04	0.05	Neutral
50	p.Gln50His	4.31	2.11	Deleterious	4.31	2.11	Deleterious
50	p.Gln50Gln	1.00	0.00	Neutral	1.00	0.00	Neutral
50	p.Gln50Pro	18.09	4.18	Deleterious	18.09	4.18	Deleterious
50	p.Gln50Leu	1.87	0.90	Indeterminate	1.87	0.90	Indeterminate
50	p.Gln50Asp	6.89	2.78	Deleterious	6.89	2.78	Deleterious
50	p.Gln50Glu	1.05	0.08	Neutral	1.05	0.08	Neutral
50	p.Gln50Ala	1.36	0.45	Indeterminate	1.36	0.45	Indeterminate
50	p.Gln50Gly	1.47	0.55	Indeterminate	1.47	0.55	Indeterminate
50	p.Gln50Val	3.95	1.98	Deleterious	3.95	1.98	Deleterious
50	p.Gln50Tyr	16.89	4.08	Deleterious	16.89	4.08	Deleterious
50	p.Gln50Cys	1.85	0.89	Indeterminate	1.85	0.89	Indeterminate
50	p.Gln50Trp	14.91	3.90	Deleterious	14.91	3.90	Deleterious
50	p.Gln50Phe	13.94	3.80	Deleterious	13.94	3.80	Deleterious
51	p.Val51Asn	2.32	1.21	Deleterious	2.32	1.21	Deleterious
51	p.Val51Lys	33.67	5.07	Deleterious	33.67	5.07	Deleterious
51	p.Val51Thr	0.95	-0.08	Neutral	0.95	-0.08	Neutral
51	p.Val51Arg	35.63	5.16	Deleterious	35.63	5.16	Deleterious
51	p.Val51Ser	0.75	-0.42	Neutral	0.75	-0.42	Neutral
51	p.Val51Ile	1.28	0.35	Indeterminate	1.28	0.35	Indeterminate
51	p.Val51Met	2.48	1.31	Deleterious	2.48	1.31	Deleterious
51	p.Val51His	19.51	4.29	Deleterious	19.51	4.29	Deleterious
51	p.Val51Gln	3.55	1.83	Deleterious	3.55	1.83	Deleterious
51	p.Val51Pro	22.42	4.49	Deleterious	22.42	4.49	Deleterious
51	p.Val51Leu	1.07	0.10	Neutral	1.07	0.10	Neutral
51	p.Val51Asp	20.68	4.37	Deleterious	20.68	4.37	Deleterious
51	p.Val51Glu	23.51	4.56	Deleterious	23.51	4.56	Deleterious
51	p.Val51Ala	0.57	-0.82	Neutral	0.57	-0.82	Neutral
51	p.Val51Gly	1.00	0.00	Neutral	1.00	0.00	Neutral
51	p.Val51Val	1.00	0.00	Neutral	1.00	0.00	Neutral
51	p.Val51Tyr	11.39	3.51	Deleterious	11.39	3.51	Deleterious
51	p.Val51Cys	0.95	-0.08	Neutral	0.95	-0.08	Neutral
51	p.Val51Trp	24.18	4.60	Deleterious	24.18	4.60	Deleterious
51	p.Val51Phe	8.55	3.10	Deleterious	8.55	3.10	Deleterious
52	p.Met52Asn	1.75	0.81	Indeterminate	1.75	0.81	Indeterminate
52	p.Met52Lys	2.56	1.36	Deleterious	2.56	1.36	Deleterious
52	p.Met52Thr	1.16	0.21	Neutral	1.16	0.21	Neutral
52	p.Met52Arg	2.66	1.41	Deleterious	2.66	1.41	Deleterious
52	p.Met52Ser	1.03	0.04	Neutral	1.03	0.04	Neutral
52	p.Met52Ile	1.42	0.51	Indeterminate	1.42	0.51	Indeterminate
52	p.Met52Met	1.00	0.00	Neutral	1.00	0.00	Neutral
52	p.Met52His	1.54	0.62	Indeterminate	1.54	0.62	Indeterminate
52	p.Met52Gln	1.22	0.29	Indeterminate	1.22	0.29	Indeterminate
52	p.Met52Pro	2.22	1.15	Deleterious	2.22	1.15	Deleterious
52	p.Met52Leu	1.05	0.08	Neutral	1.05	0.08	Neutral
52	p.Met52Asp	2.54	1.34	Deleterious	2.54	1.34	Deleterious
52	p.Met52Glu	2.04	1.03	Indeterminate	2.04	1.03	Indeterminate
52	p.Met52Ala	1.03	0.04	Neutral	1.03	0.04	Neutral
52	p.Met52Gly	0.98	-0.03	Neutral	0.98	-0.03	Neutral
52	p.Met52Val	0.98	-0.03	Neutral	0.98	-0.03	Neutral
52	p.Met52Tyr	1.50	0.59	Indeterminate	1.50	0.59	Indeterminate
52	p.Met52Cys	0.96	-0.06	Neutral	0.96	-0.06	Neutral
52	p.Met52Trp	1.98	0.99	Indeterminate	1.98	0.99	Indeterminate
52	p.Met52Phe	1.29	0.37	Indeterminate	1.29	0.37	Indeterminate
53	p.Met53Asn	2.85	1.51	Deleterious	2.85	1.51	Deleterious
53	p.Met53Lys	1.89	0.92	Indeterminate	1.89	0.92	Indeterminate
53	p.Met53Thr	3.31	1.73	Deleterious	3.31	1.73	Deleterious
53	p.Met53Arg	1.43	0.51	Indeterminate	1.43	0.51	Indeterminate
53	p.Met53Ser	1.68	0.75	Indeterminate	1.68	0.75	Indeterminate
53	p.Met53Ile	6.83	2.77	Deleterious	6.83	2.77	Deleterious
53	p.Met53Met	1.00	0.00	Neutral	1.00	0.00	Neutral
53	p.Met53His	3.28	1.71	Deleterious	3.28	1.71	Deleterious
53	p.Met53Gln	1.45	0.53	Indeterminate	1.45	0.53	Indeterminate
53	p.Met53Pro	9.71	3.28	Deleterious	9.71	3.28	Deleterious
53	p.Met53Leu	1.81	0.86	Indeterminate	1.81	0.86	Indeterminate
53	p.Met53Asp	13.93	3.80	Deleterious	13.93	3.80	Deleterious
53	p.Met53Glu	4.03	2.01	Deleterious	4.03	2.01	Deleterious
53	p.Met53Ala	1.58	0.66	Indeterminate	1.58	0.66	Indeterminate
53	p.Met53Gly	6.11	2.61	Deleterious	6.11	2.61	Deleterious

53	p.Met53Val	7.64	2.93	Deleterious			7.64	2.93	Deleterious	
53	p.Met53Tyr	6.71	2.75	Deleterious			6.71	2.75	Deleterious	
53	p.Met53Cys	1.82	0.86	Indeterminate			1.82	0.86	Indeterminate	
53	p.Met53Trp	11.34	3.50	Deleterious			11.34	3.50	Deleterious	
53	p.Met53Phe	5.92	2.57	Deleterious			5.92	2.57	Deleterious	
54	p.Met54Asn	1.34	0.43	Indeterminate			1.34	0.43	Indeterminate	
54	p.Met54Lys	1.87	0.91	Indeterminate			1.87	0.91	Indeterminate	
54	p.Met54Thr	0.96	-0.05	Neutral			0.96	-0.05	Neutral	
54	p.Met54Arg	2.35	1.23	Deleterious			2.35	1.23	Deleterious	
54	p.Met54Ser	1.12	0.17	Neutral			1.12	0.17	Neutral	
54	p.Met54Ile	1.18	0.24	Indeterminate			1.18	0.24	Indeterminate	
54	p.Met54Met	1.00	0.00	Neutral			1.00	0.00	Neutral	
54	p.Met54His	1.26	0.33	Indeterminate			1.26	0.33	Indeterminate	
54	p.Met54Gln	1.66	0.74	Indeterminate			1.66	0.74	Indeterminate	
54	p.Met54Pro	2.75	1.46	Deleterious			2.75	1.46	Deleterious	
54	p.Met54Leu	1.09	0.13	Neutral			1.09	0.13	Neutral	
54	p.Met54Asp	2.35	1.23	Deleterious			2.35	1.23	Deleterious	
54	p.Met54Glu	2.09	1.07	Indeterminate			2.09	1.07	Indeterminate	
54	p.Met54Ala	1.01	0.02	Neutral			1.01	0.02	Neutral	
54	p.Met54Gly	1.03	0.05	Neutral			1.03	0.05	Neutral	
54	p.Met54Val	1.05	0.07	Neutral			1.05	0.07	Neutral	
54	p.Met54Tyr	1.04	0.06	Neutral			1.04	0.06	Neutral	
54	p.Met54Cys	0.90	-0.15	Neutral			0.90	-0.15	Neutral	
54	p.Met54Trp	1.22	0.29	Indeterminate			1.22	0.29	Indeterminate	
54	p.Met54Phe	1.11	0.15	Neutral			1.11	0.15	Neutral	
55	p.Gly55Asn	12.63	3.66	Deleterious			12.63	3.66	Deleterious	
55	p.Gly55Lys	12.04	3.59	Deleterious			12.04	3.59	Deleterious	
55	p.Gly55Thr	9.96	3.32	Deleterious			9.96	3.32	Deleterious	
55	p.Gly55Arg	11.97	3.58	Deleterious			11.97	3.58	Deleterious	
55	p.Gly55Ser	2.68	1.42	Deleterious			2.68	1.42	Deleterious	
55	p.Gly55Ile	11.78	3.56	Deleterious			11.78	3.56	Deleterious	
55	p.Gly55Met	14.07	3.81	Deleterious			14.07	3.81	Deleterious	
55	p.Gly55His	15.68	3.97	Deleterious			15.68	3.97	Deleterious	
55	p.Gly55Gln	13.16	3.72	Deleterious			13.16	3.72	Deleterious	
55	p.Gly55Pro	20.49	4.36	Deleterious			20.49	4.36	Deleterious	
55	p.Gly55Leu	17.12	4.10	Deleterious			17.12	4.10	Deleterious	
55	p.Gly55Asp	16.49	4.04	Deleterious			16.49	4.04	Deleterious	
55	p.Gly55Glu	13.07	3.71	Deleterious			13.07	3.71	Deleterious	
55	p.Gly55Ala	1.62	0.70	Indeterminate			1.62	0.70	Indeterminate	
55	p.Gly55Gly	1.00	0.00	Neutral			1.00	0.00	Neutral	
55	p.Gly55Val	14.09	3.82	Deleterious			14.09	3.82	Deleterious	
55	p.Gly55Tyr	10.85	3.44	Deleterious			10.85	3.44	Deleterious	
55	p.Gly55Cys	3.75	1.91	Deleterious			3.75	1.91	Deleterious	
55	p.Gly55Trp	14.81	3.89	Deleterious			14.81	3.89	Deleterious	
55	p.Gly55Phe	11.47	3.52	Deleterious			11.47	3.52	Deleterious	
56	p.Ser56Asn	0.30	-1.72	Neutral			0.30	-1.72	Neutral	
56	p.Ser56Lys	0.82	-0.29	Neutral			0.82	-0.29	Neutral	
56	p.Ser56Thr	0.79	-0.34	Neutral			0.79	-0.34	Neutral	
56	p.Ser56Arg	0.38	-1.41	Neutral			0.38	-1.41	Neutral	
56	p.Ser56Ser	1.00	0.00	Neutral			1.00	0.00	Neutral	
56	p.Ser56Ile	6.45	2.69	Deleterious			6.45	2.69	Deleterious	
56	p.Ser56Met	0.42	-1.27	Neutral			0.42	-1.27	Neutral	
56	p.Ser56His	0.43	-1.23	Neutral			0.43	-1.23	Neutral	
56	p.Ser56Gln	0.57	-0.81	Neutral			0.57	-0.81	Neutral	
56	p.Ser56Pro	12.14	3.60	Deleterious			12.14	3.60	Deleterious	
56	p.Ser56Leu	1.87	0.90	Indeterminate			1.87	0.90	Indeterminate	
56	p.Ser56Asp	0.79	-0.34	Neutral			0.79	-0.34	Neutral	
56	p.Ser56Glu	1.20	0.26	Indeterminate			1.20	0.26	Indeterminate	
56	p.Ser56Ala	0.77	-0.38	Neutral			0.77	-0.38	Neutral	
56	p.Ser56Gly	1.18	0.24	Neutral			1.18	0.24	Neutral	
56	p.Ser56Val	1.16	0.22	Neutral			1.16	0.22	Neutral	
56	p.Ser56Tyr	0.50	-0.99	Neutral			0.50	-0.99	Neutral	
56	p.Ser56Cys	0.43	-1.22	Neutral			0.43	-1.22	Neutral	
56	p.Ser56Trp	4.65	2.22	Deleterious			4.65	2.22	Deleterious	
56	p.Ser56Phe	0.72	-0.47	Neutral			0.72	-0.47	Neutral	
57	p.Ala57Asn	0.47	-1.08	Neutral	1.14	0.19	Neutral	0.81	-0.31	Neutral
57	p.Ala57Lys	0.43	-1.22	Neutral	1.30	0.38	Indeterminate	0.87	-0.21	Neutral
57	p.Ala57Thr	0.56	-0.83	Neutral	1.31	0.39	Indeterminate	0.94	-0.09	Neutral
57	p.Ala57Arg	0.49	-1.03	Neutral	1.04	0.05	Neutral	0.76	-0.39	Neutral
57	p.Ala57Ser	0.58	-0.79	Neutral	1.58	0.66	Indeterminate	1.08	0.11	Neutral
57	p.Ala57Ile	0.71	-0.49	Neutral	1.17	0.23	Neutral	0.94	-0.09	Neutral
57	p.Ala57Met	0.45	-1.16	Neutral	1.26	0.33	Indeterminate	0.85	-0.23	Neutral
57	p.Ala57His	0.56	-0.84	Neutral	0.90	-0.15	Neutral	0.73	-0.45	Neutral
57	p.Ala57Gln	0.54	-0.89	Neutral	1.27	0.34	Indeterminate	0.90	-0.14	Neutral
57	p.Ala57Pro	0.62	-0.70	Neutral	1.49	0.58	Indeterminate	1.05	0.08	Neutral
57	p.Ala57Leu	0.44	-1.17	Neutral	1.62	0.70	Indeterminate	1.03	0.05	Neutral
57	p.Ala57Asp	0.77	-0.38	Neutral	1.05	0.07	Neutral	0.91	-0.14	Neutral
57	p.Ala57Glu	0.56	-0.83	Neutral	1.84	0.88	Indeterminate	1.20	0.27	Indeterminate
57	p.Ala57Ala	1.00	0.00	Neutral	1.00	0.00	Neutral	1.00	0.00	Neutral
57	p.Ala57Gly	0.50	-1.00	Neutral	1.27	0.35	Indeterminate	0.89	-0.18	Neutral
57	p.Ala57Val	0.53	-0.91	Neutral	1.10	0.14	Neutral	0.82	-0.29	Neutral
57	p.Ala57Tyr	0.52	-0.93	Neutral	1.86	0.89	Indeterminate	1.19	0.25	Indeterminate
57	p.Ala57Cys	0.38	-1.40	Neutral	1.53	0.61	Indeterminate	0.95	-0.07	Neutral
57	p.Ala57Trp	0.46	-1.13	Neutral	1.54	0.63	Indeterminate	1.00	0.00	Neutral
57	p.Ala57Phe	0.33	-1.62	Neutral	1.69	0.76	Indeterminate	1.01	0.01	Neutral
58	p.Arg58Asn	0.75	-0.41	Neutral			0.75	-0.41	Neutral	
58	p.Arg58Lys	0.71	-0.49	Neutral			0.71	-0.49	Neutral	
58	p.Arg58Thr	0.81	-0.31	Neutral			0.81	-0.31	Neutral	
58	p.Arg58Arg	1.00	0.00	Neutral			1.00	0.00	Neutral	
58	p.Arg58Ser	0.76	-0.40	Neutral			0.76	-0.40	Neutral	
58	p.Arg58Ile	0.81	-0.31	Neutral			0.81	-0.31	Neutral	
58	p.Arg58Met	0.71	-0.50	Neutral			0.71	-0.50	Neutral	
58	p.Arg58His	0.64	-0.65	Neutral			0.64	-0.65	Neutral	
58	p.Arg58Gln	0.93	-0.10	Neutral			0.93	-0.10	Neutral	
58	p.Arg58Pro	1.08	0.11	Neutral			1.08	0.11	Neutral	
58	p.Arg58Leu	0.83	-0.28	Neutral			0.83	-0.28	Neutral	
58	p.Arg58Asp	0.72	-0.48	Neutral			0.72	-0.48	Neutral	
58	p.Arg58Glu	0.83	-0.26	Neutral			0.83	-0.26	Neutral	
58	p.Arg58Ala	0.88	-0.18	Neutral			0.88	-0.18	Neutral	
58	p.Arg58Gly	0.93	-0.11	Neutral			0.93	-0.11	Neutral	
58	p.Arg58Val	0.90	-0.16	Neutral			0.90	-0.16	Neutral	
58	p.Arg58Tyr	0.62	-0.69	Neutral			0.62	-0.69	Neutral	
58	p.Arg58Cys	0.71	-0.50	Neutral			0.71	-0.50	Neutral	
58	p.Arg58Trp	0.76	-0.40	Neutral			0.76	-0.40	Neutral	
58	p.Arg58Phe	0.90	-0.16	Neutral			0.90	-0.16	Neutral	
59	p.Val59Asn	3.19	1.67	Deleterious			3.19	1.67	Deleterious	

64	p.Leu64His	1.25	0.32	Indeterminate	1.25	0.32	Indeterminate
64	p.Leu64Gln	1.34	0.43	Indeterminate	1.34	0.43	Indeterminate
64	p.Leu64Pro	3.96	1.99	Deleterious	3.96	1.99	Deleterious
64	p.Leu64Leu	1.00	0.00	Neutral	1.00	0.00	Neutral
64	p.Leu64Asp	1.80	0.85	Indeterminate	1.80	0.85	Indeterminate
64	p.Leu64Glu	1.41	0.50	Indeterminate	1.41	0.50	Indeterminate
64	p.Leu64Ala	1.14	0.19	Neutral	1.14	0.19	Neutral
64	p.Leu64Gly	1.37	0.46	Indeterminate	1.37	0.46	Indeterminate
64	p.Leu64Val	0.81	-0.30	Neutral	0.81	-0.30	Neutral
64	p.Leu64Tyr	1.01	0.02	Neutral	1.01	0.02	Neutral
64	p.Leu64Cys	0.97	-0.05	Neutral	0.97	-0.05	Neutral
64	p.Leu64Trp	1.09	0.12	Neutral	1.09	0.12	Neutral
64	p.Leu64Phe	0.83	-0.27	Neutral	0.83	-0.27	Neutral
65	p.Leu65Asn	1.41	0.50	Indeterminate	1.41	0.50	Indeterminate
65	p.Leu65Lys	0.82	-0.28	Neutral	0.82	-0.28	Neutral
65	p.Leu65Thr	1.18	0.23	Neutral	1.18	0.23	Neutral
65	p.Leu65Arg	0.95	-0.07	Neutral	0.95	-0.07	Neutral
65	p.Leu65Ser	1.22	0.29	Indeterminate	1.22	0.29	Indeterminate
65	p.Leu65Ile	0.97	-0.04	Neutral	0.97	-0.04	Neutral
65	p.Leu65Met	0.81	-0.30	Neutral	0.81	-0.30	Neutral
65	p.Leu65His	1.30	0.38	Indeterminate	1.30	0.38	Indeterminate
65	p.Leu65Gln	1.26	0.33	Indeterminate	1.26	0.33	Indeterminate
65	p.Leu65Pro	11.28	3.50	Deleterious	11.28	3.50	Deleterious
65	p.Leu65Leu	1.00	0.00	Neutral	1.00	0.00	Neutral
65	p.Leu65Asp	0.96	-0.06	Neutral	0.96	-0.06	Neutral
65	p.Leu65Glu	0.90	-0.14	Neutral	0.90	-0.14	Neutral
65	p.Leu65Ala	1.18	0.23	Neutral	1.18	0.23	Neutral
65	p.Leu65Gly	1.49	0.57	Indeterminate	1.49	0.57	Indeterminate
65	p.Leu65Val	1.11	0.15	Neutral	1.11	0.15	Neutral
65	p.Leu65Tyr	0.99	-0.01	Neutral	0.99	-0.01	Neutral
65	p.Leu65Cys	1.57	0.65	Indeterminate	1.57	0.65	Indeterminate
65	p.Leu65Trp	1.40	0.49	Indeterminate	1.40	0.49	Indeterminate
65	p.Leu65Phe	0.97	-0.05	Neutral	0.97	-0.05	Neutral
66	p.His66Asn	0.87	-0.21	Neutral	0.87	-0.21	Neutral
66	p.His66Lys	0.89	-0.16	Neutral	0.89	-0.16	Neutral
66	p.His66Thr	1.15	0.20	Neutral	1.15	0.20	Neutral
66	p.His66Arg	1.21	0.28	Indeterminate	1.21	0.28	Indeterminate
66	p.His66Ser	1.03	0.05	Neutral	1.03	0.05	Neutral
66	p.His66Ile	1.57	0.65	Indeterminate	1.57	0.65	Indeterminate
66	p.His66Met	0.91	-0.14	Neutral	0.91	-0.14	Neutral
66	p.His66His	1.00	0.00	Neutral	1.00	0.00	Neutral
66	p.His66Gln	1.14	0.19	Neutral	1.14	0.19	Neutral
66	p.His66Pro	18.02	4.17	Deleterious	18.02	4.17	Deleterious
66	p.His66Leu	1.18	0.24	Indeterminate	1.18	0.24	Indeterminate
66	p.His66Asp	0.96	-0.06	Neutral	0.96	-0.06	Neutral
66	p.His66Glu	1.34	0.42	Indeterminate	1.34	0.42	Indeterminate
66	p.His66Ala	1.24	0.31	Indeterminate	1.24	0.31	Indeterminate
66	p.His66Gly	1.08	0.12	Neutral	1.08	0.12	Neutral
66	p.His66Val	1.40	0.49	Indeterminate	1.40	0.49	Indeterminate
66	p.His66Tyr	1.05	0.08	Neutral	1.05	0.08	Neutral
66	p.His66Cys	0.69	-0.53	Neutral	0.69	-0.53	Neutral
66	p.His66Trp	0.97	-0.04	Neutral	0.97	-0.04	Neutral
66	p.His66Phe	1.00	0.00	Neutral	1.00	0.00	Neutral
67	p.Gly67Asn	0.80	-0.33	Neutral	0.80	-0.33	Neutral
67	p.Gly67Lys	1.04	0.05	Neutral	1.04	0.05	Neutral
67	p.Gly67Thr	1.66	0.73	Indeterminate	1.66	0.73	Indeterminate
67	p.Gly67Arg	0.67	-0.57	Neutral	0.67	-0.57	Neutral
67	p.Gly67Ser	0.75	-0.42	Neutral	0.75	-0.42	Neutral
67	p.Gly67Ile	7.82	2.97	Deleterious	7.82	2.97	Deleterious
67	p.Gly67Met	1.18	0.24	Neutral	1.18	0.24	Neutral
67	p.Gly67His	0.76	-0.40	Neutral	0.76	-0.40	Neutral
67	p.Gly67Gln	0.61	-0.71	Neutral	0.61	-0.71	Neutral
67	p.Gly67Pro	15.51	3.95	Deleterious	15.51	3.95	Deleterious
67	p.Gly67Leu	0.96	-0.05	Neutral	0.96	-0.05	Neutral
67	p.Gly67Asp	0.82	-0.28	Neutral	0.82	-0.28	Neutral
67	p.Gly67Glu	0.81	-0.30	Neutral	0.81	-0.30	Neutral
67	p.Gly67Ala	0.64	-0.63	Neutral	0.64	-0.63	Neutral
67	p.Gly67Gly	1.00	0.00	Neutral	1.00	0.00	Neutral
67	p.Gly67Val	4.79	2.26	Deleterious	4.79	2.26	Deleterious
67	p.Gly67Tyr	0.91	-0.14	Neutral	0.91	-0.14	Neutral
67	p.Gly67Cys	1.14	0.19	Neutral	1.14	0.19	Neutral
67	p.Gly67Trp	1.46	0.54	Indeterminate	1.46	0.54	Indeterminate
67	p.Gly67Phe	1.17	0.23	Neutral	1.17	0.23	Neutral
68	p.Ala68Asn	3.18	1.67	Deleterious	3.18	1.67	Deleterious
68	p.Ala68Lys	4.02	2.01	Deleterious	4.02	2.01	Deleterious
68	p.Ala68Thr	1.35	0.43	Indeterminate	1.35	0.43	Indeterminate
68	p.Ala68Arg	4.05	2.02	Deleterious	4.05	2.02	Deleterious
68	p.Ala68Ser	0.96	-0.05	Neutral	0.96	-0.05	Neutral
68	p.Ala68Ile	3.27	1.71	Deleterious	3.27	1.71	Deleterious
68	p.Ala68Met	2.86	1.51	Deleterious	2.86	1.51	Deleterious
68	p.Ala68His	2.14	1.10	Deleterious	2.14	1.10	Deleterious
68	p.Ala68Gln	3.25	1.70	Deleterious	3.25	1.70	Deleterious
68	p.Ala68Pro	3.53	1.82	Deleterious	3.53	1.82	Deleterious
68	p.Ala68Leu	3.66	1.87	Deleterious	3.66	1.87	Deleterious
68	p.Ala68Asp	2.46	1.30	Deleterious	2.46	1.30	Deleterious
68	p.Ala68Glu	2.62	1.39	Deleterious	2.62	1.39	Deleterious
68	p.Ala68Ala	1.00	0.00	Neutral	1.00	0.00	Neutral
68	p.Ala68Gly	1.07	0.10	Neutral	1.07	0.10	Neutral
68	p.Ala68Val	1.78	0.83	Indeterminate	1.78	0.83	Indeterminate
68	p.Ala68Tyr	3.77	1.91	Deleterious	3.77	1.91	Deleterious
68	p.Ala68Cys	1.13	0.17	Neutral	1.13	0.17	Neutral
68	p.Ala68Trp	4.01	2.01	Deleterious	4.01	2.01	Deleterious
68	p.Ala68Phe	3.65	1.87	Deleterious	3.65	1.87	Deleterious
69	p.Glu69Asn	2.72	1.44	Deleterious	2.72	1.44	Deleterious
69	p.Glu69Lys	2.34	1.23	Deleterious	2.34	1.23	Deleterious
69	p.Glu69Thr	1.54	0.62	Indeterminate	1.54	0.62	Indeterminate
69	p.Glu69Arg	1.08	0.10	Neutral	1.08	0.10	Neutral
69	p.Glu69Ser	1.80	0.85	Indeterminate	1.80	0.85	Indeterminate
69	p.Glu69Ile	1.34	0.43	Indeterminate	1.34	0.43	Indeterminate
69	p.Glu69Met	2.32	1.21	Deleterious	2.32	1.21	Deleterious
69	p.Glu69His	1.43	0.52	Indeterminate	1.43	0.52	Indeterminate
69	p.Glu69Gln	1.35	0.43	Indeterminate	1.35	0.43	Indeterminate
69	p.Glu69Pro	4.86	2.28	Deleterious	4.86	2.28	Deleterious
69	p.Glu69Leu	2.65	1.40	Deleterious	2.65	1.40	Deleterious
69	p.Glu69Asp	1.27	0.35	Indeterminate	1.27	0.35	Indeterminate
69	p.Glu69Glu	1.00	0.00	Neutral	1.00	0.00	Neutral

80	p.Arg80Ile	2.45	1.29	Deleterious	2.45	1.29	Deleterious
80	p.Arg80Met	1.45	0.54	Indeterminate	1.45	0.54	Indeterminate
80	p.Arg80His	1.31	0.39	Indeterminate	1.31	0.39	Indeterminate
80	p.Arg80Gln	1.54	0.62	Indeterminate	1.54	0.62	Indeterminate
80	p.Arg80Pro	4.66	2.22	Deleterious	4.66	2.22	Deleterious
80	p.Arg80Leu	1.47	0.56	Indeterminate	1.47	0.56	Indeterminate
80	p.Arg80Asp	1.61	0.69	Indeterminate	1.61	0.69	Indeterminate
80	p.Arg80Glu	1.16	0.21	Neutral	1.16	0.21	Neutral
80	p.Arg80Ala	1.32	0.40	Indeterminate	1.32	0.40	Indeterminate
80	p.Arg80Gly	1.34	0.42	Indeterminate	1.34	0.42	Indeterminate
80	p.Arg80Val	1.64	0.71	Indeterminate	1.64	0.71	Indeterminate
80	p.Arg80Tyr	1.46	0.55	Indeterminate	1.46	0.55	Indeterminate
80	p.Arg80Cys	0.88	-0.18	Neutral	0.88	-0.18	Neutral
80	p.Arg80Trp	1.47	0.55	Indeterminate	1.47	0.55	Indeterminate
80	p.Arg80Phe	1.55	0.63	Indeterminate	1.55	0.63	Indeterminate
81	p.Pro81Asn	4.72	2.24	Deleterious	4.72	2.24	Deleterious
81	p.Pro81Lys	6.35	2.67	Deleterious	6.35	2.67	Deleterious
81	p.Pro81Thr	2.72	1.44	Deleterious	2.72	1.44	Deleterious
81	p.Pro81Arg	4.70	2.23	Deleterious	4.70	2.23	Deleterious
81	p.Pro81Ser	3.30	1.72	Deleterious	3.30	1.72	Deleterious
81	p.Pro81Ile	3.52	1.81	Deleterious	3.52	1.81	Deleterious
81	p.Pro81Met	4.37	2.13	Deleterious	4.37	2.13	Deleterious
81	p.Pro81His	5.15	2.36	Deleterious	5.15	2.36	Deleterious
81	p.Pro81Gln	7.78	2.96	Deleterious	7.78	2.96	Deleterious
81	p.Pro81Pro	1.00	0.00	Neutral	1.00	0.00	Neutral
81	p.Pro81Leu	3.71	1.89	Deleterious	3.71	1.89	Deleterious
81	p.Pro81Asp	5.03	2.33	Deleterious	5.03	2.33	Deleterious
81	p.Pro81Glu	6.20	2.63	Deleterious	6.20	2.63	Deleterious
81	p.Pro81Ala	1.67	0.74	Indeterminate	1.67	0.74	Indeterminate
81	p.Pro81Gly	3.90	1.96	Deleterious	3.90	1.96	Deleterious
81	p.Pro81Val	2.62	1.39	Deleterious	2.62	1.39	Deleterious
81	p.Pro81Tyr	4.30	2.10	Deleterious	4.30	2.10	Deleterious
81	p.Pro81Cys	2.08	1.06	Indeterminate	2.08	1.06	Indeterminate
81	p.Pro81Trp	5.08	2.35	Deleterious	5.08	2.35	Deleterious
81	p.Pro81Phe	4.51	2.17	Deleterious	4.51	2.17	Deleterious
82	p.Val82Asn	2.35	1.23	Deleterious	2.35	1.23	Deleterious
82	p.Val82Lys	3.03	1.60	Deleterious	3.03	1.60	Deleterious
82	p.Val82Thr	1.50	0.58	Indeterminate	1.50	0.58	Indeterminate
82	p.Val82Arg	3.09	1.63	Deleterious	3.09	1.63	Deleterious
82	p.Val82Ser	1.36	0.44	Indeterminate	1.36	0.44	Indeterminate
82	p.Val82Ile	1.28	0.36	Indeterminate	1.28	0.36	Indeterminate
82	p.Val82Met	0.83	-0.27	Neutral	0.83	-0.27	Neutral
82	p.Val82His	2.45	1.29	Deleterious	2.45	1.29	Deleterious
82	p.Val82Gln	1.41	0.50	Indeterminate	1.41	0.50	Indeterminate
82	p.Val82Pro	2.04	1.03	Indeterminate	2.04	1.03	Indeterminate
82	p.Val82Leu	1.14	0.19	Neutral	1.14	0.19	Neutral
82	p.Val82Asp	2.78	1.48	Deleterious	2.78	1.48	Deleterious
82	p.Val82Glu	2.14	1.10	Deleterious	2.14	1.10	Deleterious
82	p.Val82Ala	1.01	0.01	Neutral	1.01	0.01	Neutral
82	p.Val82Gly	2.04	1.03	Indeterminate	2.04	1.03	Indeterminate
82	p.Val82Val	1.00	0.00	Neutral	1.00	0.00	Neutral
82	p.Val82Tyr	2.89	1.53	Deleterious	2.89	1.53	Deleterious
82	p.Val82Cys	1.33	0.41	Indeterminate	1.33	0.41	Indeterminate
82	p.Val82Trp	3.55	1.83	Deleterious	3.55	1.83	Deleterious
82	p.Val82Phe	1.80	0.84	Indeterminate	1.80	0.84	Indeterminate
83	p.His83Asn	7.57	2.92	Deleterious	7.57	2.92	Deleterious
83	p.His83Lys	10.58	3.40	Deleterious	10.58	3.40	Deleterious
83	p.His83Thr	6.28	2.65	Deleterious	6.28	2.65	Deleterious
83	p.His83Arg	11.18	3.48	Deleterious	11.18	3.48	Deleterious
83	p.His83Ser	6.08	2.60	Deleterious	6.08	2.60	Deleterious
83	p.His83Ile	6.54	2.71	Deleterious	6.54	2.71	Deleterious
83	p.His83Met	2.21	1.14	Deleterious	2.21	1.14	Deleterious
83	p.His83His	1.00	0.00	Neutral	1.00	0.00	Neutral
83	p.His83Gln	4.00	2.00	Deleterious	4.00	2.00	Deleterious
83	p.His83Pro	11.53	3.53	Deleterious	11.53	3.53	Deleterious
83	p.His83Leu	5.89	2.56	Deleterious	5.89	2.56	Deleterious
83	p.His83Asp	10.71	3.42	Deleterious	10.71	3.42	Deleterious
83	p.His83Glu	10.06	3.33	Deleterious	10.06	3.33	Deleterious
83	p.His83Ala	2.62	1.39	Deleterious	2.62	1.39	Deleterious
83	p.His83Gly	7.34	2.87	Deleterious	7.34	2.87	Deleterious
83	p.His83Val	9.70	3.28	Deleterious	9.70	3.28	Deleterious
83	p.His83Tyr	10.76	3.43	Deleterious	10.76	3.43	Deleterious
83	p.His83Cys	6.85	2.78	Deleterious	6.85	2.78	Deleterious
83	p.His83Trp	11.28	3.50	Deleterious	11.28	3.50	Deleterious
83	p.His83Phe	6.61	2.72	Deleterious	6.61	2.72	Deleterious
84	p.Asp84Asn	15.81	3.98	Deleterious	15.81	3.98	Deleterious
84	p.Asp84Lys	22.66	4.50	Deleterious	22.66	4.50	Deleterious
84	p.Asp84Thr	16.29	4.03	Deleterious	16.29	4.03	Deleterious
84	p.Asp84Arg	22.75	4.51	Deleterious	22.75	4.51	Deleterious
84	p.Asp84Ser	6.14	2.62	Deleterious	6.14	2.62	Deleterious
84	p.Asp84Ile	23.12	4.53	Deleterious	23.12	4.53	Deleterious
84	p.Asp84Met	19.75	4.30	Deleterious	19.75	4.30	Deleterious
84	p.Asp84His	9.00	3.17	Deleterious	9.00	3.17	Deleterious
84	p.Asp84Gln	11.40	3.51	Deleterious	11.40	3.51	Deleterious
84	p.Asp84Pro	22.54	4.49	Deleterious	22.54	4.49	Deleterious
84	p.Asp84Leu	23.46	4.55	Deleterious	23.46	4.55	Deleterious
84	p.Asp84Asp	1.00	0.00	Neutral	1.00	0.00	Neutral
84	p.Asp84Glu	1.50	0.59	Indeterminate	1.50	0.59	Indeterminate
84	p.Asp84Ala	17.18	4.10	Deleterious	17.18	4.10	Deleterious
84	p.Asp84Gly	19.24	4.27	Deleterious	19.24	4.27	Deleterious
84	p.Asp84Val	20.90	4.39	Deleterious	20.90	4.39	Deleterious
84	p.Asp84Tyr	19.97	4.32	Deleterious	19.97	4.32	Deleterious
84	p.Asp84Cys	5.90	2.56	Deleterious	5.90	2.56	Deleterious
84	p.Asp84Trp	24.74	4.63	Deleterious	24.74	4.63	Deleterious
84	p.Asp84Phe	21.67	4.44	Deleterious	21.67	4.44	Deleterious
85	p.Ala85Asn	1.29	0.37	Indeterminate	1.29	0.37	Indeterminate
85	p.Ala85Lys	2.25	1.17	Deleterious	2.25	1.17	Deleterious
85	p.Ala85Thr	1.44	0.53	Indeterminate	1.44	0.53	Indeterminate
85	p.Ala85Arg	2.24	1.16	Deleterious	2.24	1.16	Deleterious
85	p.Ala85Ser	1.08	0.11	Neutral	1.08	0.11	Neutral
85	p.Ala85Ile	1.56	0.64	Indeterminate	1.56	0.64	Indeterminate
85	p.Ala85Met	0.77	-0.37	Neutral	0.77	-0.37	Neutral
85	p.Ala85His	1.66	0.73	Indeterminate	1.66	0.73	Indeterminate
85	p.Ala85Gln	1.50	0.59	Indeterminate	1.50	0.59	Indeterminate
85	p.Ala85Pro	1.51	0.60	Indeterminate	1.51	0.60	Indeterminate
85	p.Ala85Leu	1.03	0.04	Neutral	1.03	0.04	Neutral

85	p.Ala85Asp	2.03	1.02	Indeterminate	2.03	1.02	Indeterminate
85	p.Ala85Glu	1.96	0.97	Indeterminate	1.96	0.97	Indeterminate
85	p.Ala85Ala	1.00	0.00	Neutral	1.00	0.00	Neutral
85	p.Ala85Gly	0.86	-0.22	Neutral	0.86	-0.22	Neutral
85	p.Ala85Val	1.33	0.41	Indeterminate	1.33	0.41	Indeterminate
85	p.Ala85Tyr	1.82	0.87	Indeterminate	1.82	0.87	Indeterminate
85	p.Ala85Cys	0.91	-0.14	Neutral	0.91	-0.14	Neutral
85	p.Ala85Trp	2.44	1.29	Deleterious	2.44	1.29	Deleterious
85	p.Ala85Phe	1.95	0.96	Indeterminate	1.95	0.96	Indeterminate
86	p.Ala86Asn	8.60	3.10	Deleterious	8.60	3.10	Deleterious
86	p.Ala86Lys	10.11	3.34	Deleterious	10.11	3.34	Deleterious
86	p.Ala86Thr	0.79	-0.34	Neutral	0.79	-0.34	Neutral
86	p.Ala86Arg	9.67	3.27	Deleterious	9.67	3.27	Deleterious
86	p.Ala86Ser	1.40	0.49	Indeterminate	1.40	0.49	Indeterminate
86	p.Ala86Ile	1.86	0.90	Indeterminate	1.86	0.90	Indeterminate
86	p.Ala86Met	7.54	2.92	Deleterious	7.54	2.92	Deleterious
86	p.Ala86His	8.51	3.09	Deleterious	8.51	3.09	Deleterious
86	p.Ala86Gln	9.27	3.21	Deleterious	9.27	3.21	Deleterious
86	p.Ala86Pro	8.62	3.11	Deleterious	8.62	3.11	Deleterious
86	p.Ala86Leu	7.57	2.92	Deleterious	7.57	2.92	Deleterious
86	p.Ala86Asp	8.99	3.17	Deleterious	8.99	3.17	Deleterious
86	p.Ala86Glu	9.11	3.19	Deleterious	9.11	3.19	Deleterious
86	p.Ala86Ala	1.00	0.00	Neutral	1.00	0.00	Neutral
86	p.Ala86Gly	0.86	-0.21	Neutral	0.86	-0.21	Neutral
86	p.Ala86Val	1.00	-0.01	Neutral	1.00	-0.01	Neutral
86	p.Ala86Tyr	9.41	3.23	Deleterious	9.41	3.23	Deleterious
86	p.Ala86Cys	0.66	-0.59	Neutral	0.66	-0.59	Neutral
86	p.Ala86Trp	8.43	3.08	Deleterious	8.43	3.08	Deleterious
86	p.Ala86Phe	8.66	3.11	Deleterious	8.66	3.11	Deleterious
87	p.Arg87Asn	1.10	0.13	Neutral	1.10	0.13	Neutral
87	p.Arg87Lys	0.39	-1.37	Neutral	0.39	-1.37	Neutral
87	p.Arg87Thr	1.06	0.08	Neutral	1.06	0.08	Neutral
87	p.Arg87Arg	1.00	0.00	Neutral	1.00	0.00	Neutral
87	p.Arg87Ser	2.13	1.09	Deleterious	2.13	1.09	Deleterious
87	p.Arg87Ile	1.13	0.17	Neutral	1.13	0.17	Neutral
87	p.Arg87Met	1.70	0.77	Indeterminate	1.70	0.77	Indeterminate
87	p.Arg87His	1.92	0.94	Indeterminate	1.92	0.94	Indeterminate
87	p.Arg87Gln	2.09	1.07	Indeterminate	2.09	1.07	Indeterminate
87	p.Arg87Pro	34.88	5.12	Deleterious	34.88	5.12	Deleterious
87	p.Arg87Leu	1.32	0.41	Indeterminate	1.32	0.41	Indeterminate
87	p.Arg87Asp	6.02	2.59	Deleterious	6.02	2.59	Deleterious
87	p.Arg87Glu	3.27	1.71	Deleterious	3.27	1.71	Deleterious
87	p.Arg87Ala	2.60	1.38	Deleterious	2.60	1.38	Deleterious
87	p.Arg87Gly	0.81	-0.30	Neutral	0.81	-0.30	Neutral
87	p.Arg87Val	1.15	0.20	Neutral	1.15	0.20	Neutral
87	p.Arg87Tyr	1.81	0.86	Indeterminate	1.81	0.86	Indeterminate
87	p.Arg87Cys	0.74	-0.43	Neutral	0.74	-0.43	Neutral
87	p.Arg87Trp	20.35	4.35	Deleterious	20.35	4.35	Deleterious
87	p.Arg87Phe	1.26	0.34	Indeterminate	1.26	0.34	Indeterminate
88	p.Glu88Asn	1.30	0.38	Indeterminate	1.30	0.38	Indeterminate
88	p.Glu88Lys	1.95	0.96	Indeterminate	1.95	0.96	Indeterminate
88	p.Glu88Thr	1.29	0.37	Indeterminate	1.29	0.37	Indeterminate
88	p.Glu88Arg	1.89	0.92	Indeterminate	1.89	0.92	Indeterminate
88	p.Glu88Ser	1.21	0.28	Indeterminate	1.21	0.28	Indeterminate
88	p.Glu88Ile	1.18	0.23	Neutral	1.18	0.23	Neutral
88	p.Glu88Met	1.17	0.23	Neutral	1.17	0.23	Neutral
88	p.Glu88His	1.40	0.49	Indeterminate	1.40	0.49	Indeterminate
88	p.Glu88Gln	1.27	0.35	Indeterminate	1.27	0.35	Indeterminate
88	p.Glu88Pro	3.13	1.65	Deleterious	3.13	1.65	Deleterious
88	p.Glu88Leu	1.37	0.45	Indeterminate	1.37	0.45	Indeterminate
88	p.Glu88Asp	1.36	0.44	Indeterminate	1.36	0.44	Indeterminate
88	p.Glu88Glu	1.00	0.00	Neutral	1.00	0.00	Neutral
88	p.Glu88Ala	1.08	0.10	Neutral	1.08	0.10	Neutral
88	p.Glu88Gly	1.20	0.26	Indeterminate	1.20	0.26	Indeterminate
88	p.Glu88Val	1.31	0.39	Indeterminate	1.31	0.39	Indeterminate
88	p.Glu88Tyr	1.34	0.42	Indeterminate	1.34	0.42	Indeterminate
88	p.Glu88Cys	1.15	0.21	Neutral	1.15	0.21	Neutral
88	p.Glu88Trp	1.20	0.26	Indeterminate	1.20	0.26	Indeterminate
88	p.Glu88Phe	1.41	0.49	Indeterminate	1.41	0.49	Indeterminate
89	p.Gly89Asn	1.78	0.83	Indeterminate	1.78	0.83	Indeterminate
89	p.Gly89Lys	7.99	3.00	Deleterious	7.99	3.00	Deleterious
89	p.Gly89Thr	13.14	3.72	Deleterious	13.14	3.72	Deleterious
89	p.Gly89Arg	8.98	3.17	Deleterious	8.98	3.17	Deleterious
89	p.Gly89Ser	4.06	2.02	Deleterious	4.06	2.02	Deleterious
89	p.Gly89Ile	16.30	4.03	Deleterious	16.30	4.03	Deleterious
89	p.Gly89Met	11.69	3.55	Deleterious	11.69	3.55	Deleterious
89	p.Gly89His	9.73	3.28	Deleterious	9.73	3.28	Deleterious
89	p.Gly89Gln	8.25	3.04	Deleterious	8.25	3.04	Deleterious
89	p.Gly89Pro	11.31	3.50	Deleterious	11.31	3.50	Deleterious
89	p.Gly89Leu	13.57	3.76	Deleterious	13.57	3.76	Deleterious
89	p.Gly89Asp	3.52	1.82	Deleterious	3.52	1.82	Deleterious
89	p.Gly89Glu	10.29	3.36	Deleterious	10.29	3.36	Deleterious
89	p.Gly89Ala	2.07	1.05	Indeterminate	2.07	1.05	Indeterminate
89	p.Gly89Gly	1.00	0.00	Neutral	1.00	0.00	Neutral
89	p.Gly89Val	14.96	3.90	Deleterious	14.96	3.90	Deleterious
89	p.Gly89Tyr	14.02	3.81	Deleterious	14.02	3.81	Deleterious
89	p.Gly89Cys	4.06	2.02	Deleterious	4.06	2.02	Deleterious
89	p.Gly89Trp	14.23	3.83	Deleterious	14.23	3.83	Deleterious
89	p.Gly89Phe	13.71	3.78	Deleterious	13.71	3.78	Deleterious
90	p.Phe90Asn	0.89	-0.17	Neutral	0.89	-0.17	Neutral
90	p.Phe90Lys	1.21	0.28	Indeterminate	1.21	0.28	Indeterminate
90	p.Phe90Thr	1.15	0.21	Neutral	1.15	0.21	Neutral
90	p.Phe90Arg	0.96	-0.06	Neutral	0.96	-0.06	Neutral
90	p.Phe90Ser	0.94	-0.08	Neutral	0.94	-0.08	Neutral
90	p.Phe90Ile	0.87	-0.20	Neutral	0.87	-0.20	Neutral
90	p.Phe90Met	0.75	-0.42	Neutral	0.75	-0.42	Neutral
90	p.Phe90His	0.78	-0.36	Neutral	0.78	-0.36	Neutral
90	p.Phe90Gln	0.76	-0.40	Neutral	0.76	-0.40	Neutral
90	p.Phe90Pro	1.62	0.70	Indeterminate	1.62	0.70	Indeterminate
90	p.Phe90Leu	0.78	-0.36	Neutral	0.78	-0.36	Neutral
90	p.Phe90Asp	1.73	0.79	Indeterminate	1.73	0.79	Indeterminate
90	p.Phe90Glu	1.15	0.21	Neutral	1.15	0.21	Neutral
90	p.Phe90Ala	0.84	-0.24	Neutral	0.84	-0.24	Neutral
90	p.Phe90Gly	1.01	0.02	Neutral	1.01	0.02	Neutral
90	p.Phe90Val	1.11	0.15	Neutral	1.11	0.15	Neutral
90	p.Phe90Tyr	0.80	-0.32	Neutral	0.80	-0.32	Neutral

90	p.Phe90Cys	0.99	-0.01	Neutral	0.99	-0.01	Neutral
90	p.Phe90Trp	0.93	-0.10	Neutral	0.93	-0.10	Neutral
90	p.Phe90Phe	1.00	0.00	Neutral	1.00	0.00	Neutral
91	p.Leu91Asn	0.70	-0.51	Neutral	0.70	-0.51	Neutral
91	p.Leu91Lys	1.43	0.52	Indeterminate	1.43	0.52	Indeterminate
91	p.Leu91Thr	1.46	0.54	Indeterminate	1.46	0.54	Indeterminate
91	p.Leu91Arg	1.16	0.21	Neutral	1.16	0.21	Neutral
91	p.Leu91Ser	1.94	0.96	Indeterminate	1.94	0.96	Indeterminate
91	p.Leu91Ile	1.70	0.76	Indeterminate	1.70	0.76	Indeterminate
91	p.Leu91Met	2.60	1.38	Deleterious	2.60	1.38	Deleterious
91	p.Leu91His	1.68	0.75	Indeterminate	1.68	0.75	Indeterminate
91	p.Leu91Gln	0.79	-0.33	Neutral	0.79	-0.33	Neutral
91	p.Leu91Pro	1.53	0.61	Indeterminate	1.53	0.61	Indeterminate
91	p.Leu91Leu	1.00	0.00	Neutral	1.00	0.00	Neutral
91	p.Leu91Asp	1.31	0.39	Indeterminate	1.31	0.39	Indeterminate
91	p.Leu91Glu	1.34	0.43	Indeterminate	1.34	0.43	Indeterminate
91	p.Leu91Ala	1.03	0.04	Neutral	1.03	0.04	Neutral
91	p.Leu91Gly	1.39	0.47	Indeterminate	1.39	0.47	Indeterminate
91	p.Leu91Val	1.29	0.37	Indeterminate	1.29	0.37	Indeterminate
91	p.Leu91Tyr	3.09	1.63	Deleterious	3.09	1.63	Deleterious
91	p.Leu91Cys	0.96	-0.05	Neutral	0.96	-0.05	Neutral
91	p.Leu91Trp	1.59	0.67	Indeterminate	1.59	0.67	Indeterminate
91	p.Leu91Phe	2.11	1.08	Indeterminate	2.11	1.08	Indeterminate
92	p.Asp92Asn	1.06	0.08	Neutral	1.06	0.08	Neutral
92	p.Asp92Lys	1.23	0.30	Indeterminate	1.23	0.30	Indeterminate
92	p.Asp92Thr	0.90	-0.16	Neutral	0.90	-0.16	Neutral
92	p.Asp92Arg	1.02	0.03	Neutral	1.02	0.03	Neutral
92	p.Asp92Ser	0.97	-0.05	Neutral	0.97	-0.05	Neutral
92	p.Asp92Ile	1.19	0.25	Indeterminate	1.19	0.25	Indeterminate
92	p.Asp92Met	0.98	-0.03	Neutral	0.98	-0.03	Neutral
92	p.Asp92His	1.09	0.13	Neutral	1.09	0.13	Neutral
92	p.Asp92Gln	1.04	0.06	Neutral	1.04	0.06	Neutral
92	p.Asp92Pro	1.11	0.15	Neutral	1.11	0.15	Neutral
92	p.Asp92Leu	1.02	0.02	Neutral	1.02	0.02	Neutral
92	p.Asp92Asp	1.00	0.00	Neutral	1.00	0.00	Neutral
92	p.Asp92Glu	1.10	0.14	Neutral	1.10	0.14	Neutral
92	p.Asp92Ala	1.12	0.17	Neutral	1.12	0.17	Neutral
92	p.Asp92Gly	1.17	0.22	Neutral	1.17	0.22	Neutral
92	p.Asp92Val	1.03	0.04	Neutral	1.03	0.04	Neutral
92	p.Asp92Tyr	1.04	0.05	Neutral	1.04	0.05	Neutral
92	p.Asp92Cys	0.98	-0.03	Neutral	0.98	-0.03	Neutral
92	p.Asp92Trp	1.05	0.08	Neutral	1.05	0.08	Neutral
92	p.Asp92Phe	1.21	0.28	Indeterminate	1.21	0.28	Indeterminate
93	p.Thr93Asn	1.83	0.87	Indeterminate	1.83	0.87	Indeterminate
93	p.Thr93Lys	3.80	1.93	Deleterious	3.80	1.93	Deleterious
93	p.Thr93Thr	1.00	0.00	Neutral	1.00	0.00	Neutral
93	p.Thr93Arg	2.46	1.30	Deleterious	2.46	1.30	Deleterious
93	p.Thr93Ser	1.46	0.55	Indeterminate	1.46	0.55	Indeterminate
93	p.Thr93Ile	0.98	-0.03	Neutral	0.98	-0.03	Neutral
93	p.Thr93Met	1.77	0.82	Indeterminate	1.77	0.82	Indeterminate
93	p.Thr93His	2.45	1.29	Deleterious	2.45	1.29	Deleterious
93	p.Thr93Gln	2.20	1.14	Deleterious	2.20	1.14	Deleterious
93	p.Thr93Pro	6.26	2.65	Deleterious	6.26	2.65	Deleterious
93	p.Thr93Leu	1.62	0.70	Indeterminate	1.62	0.70	Indeterminate
93	p.Thr93Asp	2.94	1.56	Deleterious	2.94	1.56	Deleterious
93	p.Thr93Glu	2.43	1.28	Deleterious	2.43	1.28	Deleterious
93	p.Thr93Ala	2.32	1.21	Deleterious	2.32	1.21	Deleterious
93	p.Thr93Gly	2.45	1.29	Deleterious	2.45	1.29	Deleterious
93	p.Thr93Val	1.45	0.53	Indeterminate	1.45	0.53	Indeterminate
93	p.Thr93Tyr	2.87	1.52	Deleterious	2.87	1.52	Deleterious
93	p.Thr93Cys	1.63	0.70	Indeterminate	1.63	0.70	Indeterminate
93	p.Thr93Trp	2.31	1.21	Deleterious	2.31	1.21	Deleterious
93	p.Thr93Phe	1.98	0.98	Indeterminate	1.98	0.98	Indeterminate
94	p.Leu94Asn	2.32	1.21	Deleterious	2.32	1.21	Deleterious
94	p.Leu94Lys	6.25	2.64	Deleterious	6.25	2.64	Deleterious
94	p.Leu94Thr	2.48	1.31	Deleterious	2.48	1.31	Deleterious
94	p.Leu94Arg	8.16	3.03	Deleterious	8.16	3.03	Deleterious
94	p.Leu94Ser	0.96	-0.06	Neutral	0.96	-0.06	Neutral
94	p.Leu94Ile	0.69	-0.54	Neutral	0.69	-0.54	Neutral
94	p.Leu94Met	0.42	-1.25	Neutral	0.42	-1.25	Neutral
94	p.Leu94His	8.80	3.14	Deleterious	8.80	3.14	Deleterious
94	p.Leu94Gln	4.83	2.27	Deleterious	4.83	2.27	Deleterious
94	p.Leu94Pro	5.87	2.55	Deleterious	5.87	2.55	Deleterious
94	p.Leu94Leu	1.00	0.00	Neutral	1.00	0.00	Neutral
94	p.Leu94Asp	7.73	2.95	Deleterious	7.73	2.95	Deleterious
94	p.Leu94Glu	4.47	2.16	Deleterious	4.47	2.16	Deleterious
94	p.Leu94Ala	2.30	1.20	Deleterious	2.30	1.20	Deleterious
94	p.Leu94Gly	4.46	2.16	Deleterious	4.46	2.16	Deleterious
94	p.Leu94Val	1.22	0.28	Indeterminate	1.22	0.28	Indeterminate
94	p.Leu94Tyr	9.51	3.25	Deleterious	9.51	3.25	Deleterious
94	p.Leu94Cys	1.83	0.87	Indeterminate	1.83	0.87	Indeterminate
94	p.Leu94Trp	7.26	2.86	Deleterious	7.26	2.86	Deleterious
94	p.Leu94Phe	1.87	0.91	Indeterminate	1.87	0.91	Indeterminate
95	p.Val95Asn	1.08	0.11	Neutral	1.08	0.11	Neutral
95	p.Val95Lys	0.93	-0.10	Neutral	0.93	-0.10	Neutral
95	p.Val95Thr	0.99	-0.01	Neutral	0.99	-0.01	Neutral
95	p.Val95Arg	1.09	0.13	Neutral	1.09	0.13	Neutral
95	p.Val95Ser	1.08	0.11	Neutral	1.08	0.11	Neutral
95	p.Val95Ile	0.99	-0.02	Neutral	0.99	-0.02	Neutral
95	p.Val95Met	1.00	0.00	Neutral	1.00	0.00	Neutral
95	p.Val95His	0.78	-0.36	Neutral	0.78	-0.36	Neutral
95	p.Val95Gln	0.98	-0.03	Neutral	0.98	-0.03	Neutral
95	p.Val95Pro	4.78	2.26	Deleterious	4.78	2.26	Deleterious
95	p.Val95Leu	0.82	-0.28	Neutral	0.82	-0.28	Neutral
95	p.Val95Asp	0.96	-0.06	Neutral	0.96	-0.06	Neutral
95	p.Val95Glu	1.05	0.08	Neutral	1.05	0.08	Neutral
95	p.Val95Ala	0.74	-0.44	Neutral	0.74	-0.44	Neutral
95	p.Val95Gly	1.03	0.04	Neutral	1.03	0.04	Neutral
95	p.Val95Val	1.00	0.00	Neutral	1.00	0.00	Neutral
95	p.Val95Tyr	1.02	0.02	Neutral	1.02	0.02	Neutral
95	p.Val95Cys	0.82	-0.28	Neutral	0.82	-0.28	Neutral
95	p.Val95Trp	1.21	0.27	Indeterminate	1.21	0.27	Indeterminate
95	p.Val95Phe	1.11	0.15	Neutral	1.11	0.15	Neutral
96	p.Val96Asn	0.75	-0.41	Neutral	0.99	-0.02	Neutral
96	p.Val96Lys	0.89	-0.17	Neutral	0.92	-0.13	Neutral
96	p.Val96Thr	0.69	-0.53	Neutral	0.81	-0.31	Neutral

96	p.Val96Arg	0.85	-0.24	Neutral	1.02	0.02	Neutral	0.93	-0.10	Neutral
96	p.Val96Ser	0.75	-0.41	Neutral	0.78	-0.35	Neutral	0.77	-0.38	Neutral
96	p.Val96Ile	0.84	-0.25	Neutral	1.01	0.02	Neutral	0.93	-0.11	Neutral
96	p.Val96Met	0.70	-0.52	Neutral	0.82	-0.29	Neutral	0.76	-0.40	Neutral
96	p.Val96His	0.93	-0.10	Neutral	0.92	-0.13	Neutral	0.93	-0.11	Neutral
96	p.Val96Gln	0.86	-0.23	Neutral	1.10	0.14	Neutral	0.98	-0.03	Neutral
96	p.Val96Pro	0.93	-0.10	Neutral	0.87	-0.20	Neutral	0.90	-0.15	Neutral
96	p.Val96Leu	0.87	-0.20	Neutral	1.21	0.28	Indeterminate	1.04	0.06	Neutral
96	p.Val96Asp	0.82	-0.29	Neutral	1.26	0.33	Indeterminate	1.04	0.05	Neutral
96	p.Val96Glu	0.65	-0.63	Neutral	1.05	0.08	Neutral	0.85	-0.23	Neutral
96	p.Val96Ala	1.10	0.14	Neutral	1.53	0.62	Indeterminate	1.32	0.40	Indeterminate
96	p.Val96Gly	1.13	0.18	Neutral	0.86	-0.22	Neutral	0.99	-0.01	Neutral
96	p.Val96Val	1.00	0.00	Neutral	1.00	0.00	Neutral	1.00	0.00	Neutral
96	p.Val96Tyr	0.82	-0.28	Neutral	1.08	0.11	Neutral	0.95	-0.07	Neutral
96	p.Val96Cys	0.82	-0.28	Neutral	1.37	0.45	Indeterminate	1.10	0.13	Neutral
96	p.Val96Trp	0.70	-0.51	Neutral	1.46	0.54	Indeterminate	1.08	0.11	Neutral
96	p.Val96Phe	0.72	-0.48	Neutral	1.08	0.11	Neutral	0.90	-0.15	Neutral
97	p.Leu97Asn	7.43	2.89	Deleterious				7.43	2.89	Deleterious
97	p.Leu97Lys	8.27	3.05	Deleterious				8.27	3.05	Deleterious
97	p.Leu97Thr	5.89	2.56	Deleterious				5.89	2.56	Deleterious
97	p.Leu97Arg	8.53	3.09	Deleterious				8.53	3.09	Deleterious
97	p.Leu97Ser	7.64	2.93	Deleterious				7.64	2.93	Deleterious
97	p.Leu97Ile	0.85	-0.24	Neutral				0.85	-0.24	Neutral
97	p.Leu97Met	0.69	-0.53	Neutral				0.69	-0.53	Neutral
97	p.Leu97His	6.20	2.63	Deleterious				6.20	2.63	Deleterious
97	p.Leu97Gln	4.19	2.07	Deleterious				4.19	2.07	Deleterious
97	p.Leu97Pro	8.72	3.12	Deleterious				8.72	3.12	Deleterious
97	p.Leu97Leu	1.00	0.00	Neutral				1.00	0.00	Neutral
97	p.Leu97Asp	8.74	3.13	Deleterious				8.74	3.13	Deleterious
97	p.Leu97Glu	6.81	2.77	Deleterious				6.81	2.77	Deleterious
97	p.Leu97Ala	4.79	2.26	Deleterious				4.79	2.26	Deleterious
97	p.Leu97Gly	8.76	3.13	Deleterious				8.76	3.13	Deleterious
97	p.Leu97Val	1.68	0.75	Indeterminate				1.68	0.75	Indeterminate
97	p.Leu97Tyr	1.01	0.01	Neutral				1.01	0.01	Neutral
97	p.Leu97Cys	1.03	0.04	Neutral				1.03	0.04	Neutral
97	p.Leu97Trp	6.72	2.75	Deleterious				6.72	2.75	Deleterious
97	p.Leu97Phe	0.92	-0.12	Neutral				0.92	-0.12	Neutral
98	p.His98Asn	1.02	0.02	Neutral				1.02	0.02	Neutral
98	p.His98Lys	0.92	-0.12	Neutral				0.92	-0.12	Neutral
98	p.His98Thr	1.07	0.10	Neutral				1.07	0.10	Neutral
98	p.His98Arg	1.00	0.00	Neutral				1.00	0.00	Neutral
98	p.His98Ser	1.29	0.37	Indeterminate				1.29	0.37	Indeterminate
98	p.His98Ile	0.98	-0.03	Neutral				0.98	-0.03	Neutral
98	p.His98Met	0.97	-0.04	Neutral				0.97	-0.04	Neutral
98	p.His98His	1.00	0.00	Neutral				1.00	0.00	Neutral
98	p.His98Gln	1.19	0.25	Indeterminate				1.19	0.25	Indeterminate
98	p.His98Pro	5.39	2.43	Deleterious				5.39	2.43	Deleterious
98	p.His98Leu	1.15	0.21	Neutral				1.15	0.21	Neutral
98	p.His98Asp	1.26	0.34	Indeterminate				1.26	0.34	Indeterminate
98	p.His98Glu	1.04	0.06	Neutral				1.04	0.06	Neutral
98	p.His98Ala	0.93	-0.10	Neutral				0.93	-0.10	Neutral
98	p.His98Gly	1.16	0.21	Neutral				1.16	0.21	Neutral
98	p.His98Val	1.07	0.10	Neutral				1.07	0.10	Neutral
98	p.His98Tyr	1.07	0.10	Neutral				1.07	0.10	Neutral
98	p.His98Cys	1.09	0.12	Neutral				1.09	0.12	Neutral
98	p.His98Trp	0.94	-0.10	Neutral				0.94	-0.10	Neutral
98	p.His98Phe	0.94	-0.08	Neutral				0.94	-0.08	Neutral
99	p.Arg99Asn	1.39	0.47	Indeterminate				1.39	0.47	Indeterminate
99	p.Arg99Lys	1.20	0.26	Indeterminate				1.20	0.26	Indeterminate
99	p.Arg99Thr	1.46	0.55	Indeterminate				1.46	0.55	Indeterminate
99	p.Arg99Arg	1.00	0.00	Neutral				1.00	0.00	Neutral
99	p.Arg99Ser	1.46	0.54	Indeterminate				1.46	0.54	Indeterminate
99	p.Arg99Ile	1.26	0.33	Indeterminate				1.26	0.33	Indeterminate
99	p.Arg99Met	1.60	0.68	Indeterminate				1.60	0.68	Indeterminate
99	p.Arg99His	0.94	-0.09	Neutral				0.94	-0.09	Neutral
99	p.Arg99Gln	0.92	-0.11	Neutral				0.92	-0.11	Neutral
99	p.Arg99Pro	38.44	5.26	Deleterious				38.44	5.26	Deleterious
99	p.Arg99Leu	1.72	0.78	Indeterminate				1.72	0.78	Indeterminate
99	p.Arg99Asp	1.92	0.94	Indeterminate				1.92	0.94	Indeterminate
99	p.Arg99Glu	1.40	0.48	Indeterminate				1.40	0.48	Indeterminate
99	p.Arg99Ala	2.31	1.21	Deleterious				2.31	1.21	Deleterious
99	p.Arg99Gly	1.02	0.03	Neutral				1.02	0.03	Neutral
99	p.Arg99Val	2.27	1.18	Deleterious				2.27	1.18	Deleterious
99	p.Arg99Tyr	1.06	0.09	Neutral				1.06	0.09	Neutral
99	p.Arg99Cys	1.77	0.82	Indeterminate				1.77	0.82	Indeterminate
99	p.Arg99Trp	1.83	0.87	Indeterminate				1.83	0.87	Indeterminate
99	p.Arg99Phe	1.14	0.19	Neutral				1.14	0.19	Neutral
100	p.Ala100Asn	1.10	0.13	Neutral				1.10	0.13	Neutral
100	p.Ala100Lys	0.94	-0.09	Neutral				0.94	-0.09	Neutral
100	p.Ala100Thr	1.34	0.42	Indeterminate				1.34	0.42	Indeterminate
100	p.Ala100Arg	0.92	-0.12	Neutral				0.92	-0.12	Neutral
100	p.Ala100Ser	0.74	-0.44	Neutral				0.74	-0.44	Neutral
100	p.Ala100Ile	1.05	0.06	Neutral				1.05	0.06	Neutral
100	p.Ala100Met	1.30	0.38	Indeterminate				1.30	0.38	Indeterminate
100	p.Ala100His	0.79	-0.35	Neutral				0.79	-0.35	Neutral
100	p.Ala100Gln	1.02	0.03	Neutral				1.02	0.03	Neutral
100	p.Ala100Pro	13.53	3.76	Deleterious				13.53	3.76	Deleterious
100	p.Ala100Leu	0.87	-0.20	Neutral				0.87	-0.20	Neutral
100	p.Ala100Asp	0.73	-0.45	Neutral				0.73	-0.45	Neutral
100	p.Ala100Glu	1.75	0.81	Indeterminate				1.75	0.81	Indeterminate
100	p.Ala100Ala	1.00	0.00	Neutral				1.00	0.00	Neutral
100	p.Ala100Gly	3.88	1.95	Deleterious				3.88	1.95	Deleterious
100	p.Ala100Val	0.82	-0.29	Neutral				0.82	-0.29	Neutral
100	p.Ala100Tyr	1.16	0.22	Neutral				1.16	0.22	Neutral
100	p.Ala100Cys	0.64	-0.64	Neutral				0.64	-0.64	Neutral
100	p.Ala100Trp	0.77	-0.38	Neutral				0.77	-0.38	Neutral
100	p.Ala100Phe	0.74	-0.44	Neutral				0.74	-0.44	Neutral
101	p.Gly101Asn	1.44	0.52	Indeterminate				1.44	0.52	Indeterminate
101	p.Gly101Lys	1.85	0.89	Indeterminate				1.85	0.89	Indeterminate
101	p.Gly101Thr	2.15	1.11	Deleterious				2.15	1.11	Deleterious
101	p.Gly101Arg	1.68	0.75	Indeterminate				1.68	0.75	Indeterminate
101	p.Gly101Ser	1.58	0.66	Indeterminate				1.58	0.66	Indeterminate
101	p.Gly101Ile	9.59	3.26	Deleterious				9.59	3.26	Deleterious
101	p.Gly101Met	2.07	1.05	Indeterminate				2.07	1.05	Indeterminate
101	p.Gly101His	1.59	0.67	Indeterminate				1.59	0.67	Indeterminate
101	p.Gly101Gln	1.58	0.66	Indeterminate				1.58	0.66	Indeterminate

101	p.Gly101Pro	8.50	3.09	Deleterious			8.50	3.09	Deleterious	
101	p.Gly101Leu	3.51	1.81	Deleterious			3.51	1.81	Deleterious	
101	p.Gly101Asp	1.31	0.39	Indeterminate			1.31	0.39	Indeterminate	
101	p.Gly101Glu	1.85	0.89	Indeterminate			1.85	0.89	Indeterminate	
101	p.Gly101Ala	1.61	0.68	Indeterminate			1.61	0.68	Indeterminate	
101	p.Gly101Gly	1.00	0.00	Neutral			1.00	0.00	Neutral	
101	p.Gly101Val	8.71	3.12	Deleterious			8.71	3.12	Deleterious	
101	p.Gly101Tyr	2.53	1.34	Deleterious			2.53	1.34	Deleterious	
101	p.Gly101Cys	1.65	0.72	Indeterminate			1.65	0.72	Indeterminate	
101	p.Gly101Trp	4.49	2.17	Deleterious			4.49	2.17	Deleterious	
101	p.Gly101Phe	2.19	1.13	Deleterious			2.19	1.13	Deleterious	
102	p.Ala102Asn	10.55	3.40	Deleterious			10.55	3.40	Deleterious	
102	p.Ala102Lys	27.85	4.80	Deleterious			27.85	4.80	Deleterious	
102	p.Ala102Thr	11.34	3.50	Deleterious			11.34	3.50	Deleterious	
102	p.Ala102Arg	46.34	5.53	Deleterious			46.34	5.53	Deleterious	
102	p.Ala102Ser	2.38	1.25	Deleterious			2.38	1.25	Deleterious	
102	p.Ala102Ile	18.46	4.21	Deleterious			18.46	4.21	Deleterious	
102	p.Ala102Met	27.54	4.78	Deleterious			27.54	4.78	Deleterious	
102	p.Ala102His	17.65	4.14	Deleterious			17.65	4.14	Deleterious	
102	p.Ala102Gln	25.99	4.70	Deleterious			25.99	4.70	Deleterious	
102	p.Ala102Pro	30.62	4.94	Deleterious			30.62	4.94	Deleterious	
102	p.Ala102Leu	39.02	5.29	Deleterious			39.02	5.29	Deleterious	
102	p.Ala102Asp	27.75	4.79	Deleterious			27.75	4.79	Deleterious	
102	p.Ala102Glu	36.84	5.20	Deleterious			36.84	5.20	Deleterious	
102	p.Ala102Ala	1.00	0.00	Neutral			1.00	0.00	Neutral	
102	p.Ala102Gly	0.56	-0.83	Neutral			0.56	-0.83	Neutral	
102	p.Ala102Val	2.29	1.20	Deleterious			2.29	1.20	Deleterious	
102	p.Ala102Tyr	44.70	5.48	Deleterious			44.70	5.48	Deleterious	
102	p.Ala102Cys	1.34	0.42	Indeterminate			1.34	0.42	Indeterminate	
102	p.Ala102Trp	33.48	5.07	Deleterious			33.48	5.07	Deleterious	
102	p.Ala102Phe	38.33	5.26	Deleterious			38.33	5.26	Deleterious	
103	p.Arg103Asn	0.96	-0.06	Neutral			0.96	-0.06	Neutral	
103	p.Arg103Lys	1.02	0.02	Neutral			1.02	0.02	Neutral	
103	p.Arg103Thr	1.50	0.59	Indeterminate			1.50	0.59	Indeterminate	
103	p.Arg103Arg	1.00	0.00	Neutral			1.00	0.00	Neutral	
103	p.Arg103Ser	0.63	-0.67	Neutral			0.63	-0.67	Neutral	
103	p.Arg103Ile	1.31	0.39	Indeterminate			1.31	0.39	Indeterminate	
103	p.Arg103Met	1.03	0.04	Neutral			1.03	0.04	Neutral	
103	p.Arg103His	0.82	-0.28	Neutral			0.82	-0.28	Neutral	
103	p.Arg103Gln	0.99	-0.02	Neutral			0.99	-0.02	Neutral	
103	p.Arg103Pro	0.81	-0.30	Neutral			0.81	-0.30	Neutral	
103	p.Arg103Leu	0.65	-0.62	Neutral			0.65	-0.62	Neutral	
103	p.Arg103Asp	0.73	-0.45	Neutral			0.73	-0.45	Neutral	
103	p.Arg103Glu	0.80	-0.33	Neutral			0.80	-0.33	Neutral	
103	p.Arg103Ala	0.81	-0.31	Neutral			0.81	-0.31	Neutral	
103	p.Arg103Gly	0.96	-0.05	Neutral			0.96	-0.05	Neutral	
103	p.Arg103Val	0.85	-0.23	Neutral			0.85	-0.23	Neutral	
103	p.Arg103Tyr	1.09	0.12	Neutral			1.09	0.12	Neutral	
103	p.Arg103Cys	1.05	0.08	Neutral			1.05	0.08	Neutral	
103	p.Arg103Trp	0.90	-0.16	Neutral			0.90	-0.16	Neutral	
103	p.Arg103Phe	0.92	-0.12	Neutral			0.92	-0.12	Neutral	
104	p.Leu104Asn	0.44	-1.17	Neutral			0.44	-1.17	Neutral	
104	p.Leu104Lys	2.06	1.04	Indeterminate			2.06	1.04	Indeterminate	
104	p.Leu104Thr	0.46	-1.11	Neutral			0.46	-1.11	Neutral	
104	p.Leu104Arg	4.06	2.02	Deleterious			4.06	2.02	Deleterious	
104	p.Leu104Ser	0.37	-1.43	Neutral			0.37	-1.43	Neutral	
104	p.Leu104Ile	0.22	-2.16	Neutral			0.22	-2.16	Neutral	
104	p.Leu104Met	0.23	-2.10	Neutral			0.23	-2.10	Neutral	
104	p.Leu104His	0.30	-1.73	Neutral			0.30	-1.73	Neutral	
104	p.Leu104Gln	0.74	-0.43	Neutral			0.74	-0.43	Neutral	
104	p.Leu104Pro	0.51	-0.99	Neutral			0.51	-0.99	Neutral	
104	p.Leu104Leu	1.00	0.00	Neutral			1.00	0.00	Neutral	
104	p.Leu104Asp	0.46	-1.13	Neutral			0.46	-1.13	Neutral	
104	p.Leu104Glu	0.72	-0.48	Neutral			0.72	-0.48	Neutral	
104	p.Leu104Ala	0.20	-2.33	Neutral			0.20	-2.33	Neutral	
104	p.Leu104Gly	4.15	2.05	Deleterious			4.15	2.05	Deleterious	
104	p.Leu104Val	0.14	-2.87	Neutral			0.14	-2.87	Neutral	
104	p.Leu104Tyr	0.20	-2.29	Neutral			0.20	-2.29	Neutral	
104	p.Leu104Cys	0.24	-2.04	Neutral			0.24	-2.04	Neutral	
104	p.Leu104Trp	0.10	-3.32	Neutral			0.10	-3.32	Neutral	
104	p.Leu104Phe	0.10	-3.34	Neutral			0.10	-3.34	Neutral	
105	p.Asp105Asn	1.03	0.05	Neutral			1.03	0.05	Neutral	
105	p.Asp105Lys	1.92	0.94	Indeterminate			1.92	0.94	Indeterminate	
105	p.Asp105Thr	1.45	0.53	Indeterminate			1.45	0.53	Indeterminate	
105	p.Asp105Arg	2.45	1.29	Deleterious			2.45	1.29	Deleterious	
105	p.Asp105Ser	2.08	1.06	Indeterminate			2.08	1.06	Indeterminate	
105	p.Asp105Ile	2.64	1.40	Deleterious			2.64	1.40	Deleterious	
105	p.Asp105Met	1.49	0.57	Indeterminate			1.49	0.57	Indeterminate	
105	p.Asp105His	1.65	0.72	Indeterminate			1.65	0.72	Indeterminate	
105	p.Asp105Gln	1.87	0.90	Indeterminate			1.87	0.90	Indeterminate	
105	p.Asp105Pro	9.48	3.25	Deleterious			9.48	3.25	Deleterious	
105	p.Asp105Leu	1.85	0.89	Indeterminate			1.85	0.89	Indeterminate	
105	p.Asp105Asp	1.00	0.00	Neutral			1.00	0.00	Neutral	
105	p.Asp105Glu	2.10	1.07	Indeterminate			2.10	1.07	Indeterminate	
105	p.Asp105Ala	1.39	0.48	Indeterminate			1.39	0.48	Indeterminate	
105	p.Asp105Gly	2.69	1.43	Deleterious			2.69	1.43	Deleterious	
105	p.Asp105Val	2.38	1.25	Deleterious			2.38	1.25	Deleterious	
105	p.Asp105Tyr	0.54	-0.90	Neutral			0.54	-0.90	Neutral	
105	p.Asp105Cys	0.58	-0.79	Neutral			0.58	-0.79	Neutral	
105	p.Asp105Trp	1.37	0.46	Indeterminate			1.37	0.46	Indeterminate	
105	p.Asp105Phe	1.80	0.85	Indeterminate			1.80	0.85	Indeterminate	
106	p.Val106Asn	1.34	0.43	Indeterminate	1.20	0.26	Indeterminate	1.27	0.35	Indeterminate
106	p.Val106Lys	1.74	0.80	Indeterminate	1.13	0.17	Neutral	1.43	0.52	Indeterminate
106	p.Val106Thr	0.96	-0.05	Neutral	1.03	0.04	Neutral	1.00	-0.01	Neutral
106	p.Val106Arg	1.68	0.75	Indeterminate	0.93	-0.11	Neutral	1.30	0.38	Indeterminate
106	p.Val106Ser	1.08	0.11	Neutral	0.98	-0.03	Neutral	1.03	0.04	Neutral
106	p.Val106Ile	0.67	-0.57	Neutral	1.16	0.22	Neutral	0.92	-0.12	Neutral
106	p.Val106Met	1.00	0.00	Neutral	1.06	0.08	Neutral	1.03	0.04	Neutral
106	p.Val106His	0.96	-0.06	Neutral	1.06	0.08	Neutral	1.01	0.02	Neutral
106	p.Val106Gln	0.74	-0.43	Neutral	1.25	0.32	Indeterminate	0.99	-0.01	Neutral
106	p.Val106Pro	1.70	0.76	Indeterminate	1.14	0.19	Neutral	1.42	0.51	Indeterminate
106	p.Val106Leu	1.21	0.27	Indeterminate	1.05	0.07	Neutral	1.13	0.17	Neutral
106	p.Val106Asp	0.98	-0.03	Neutral	1.21	0.28	Indeterminate	1.10	0.13	Neutral
106	p.Val106Glu	1.58	0.66	Indeterminate	1.07	0.10	Neutral	1.33	0.41	Indeterminate
106	p.Val106Ala	1.47	0.55	Indeterminate	1.14	0.19	Neutral	1.30	0.38	Indeterminate
106	p.Val106Gly	1.55	0.63	Indeterminate	0.95	-0.08	Neutral	1.25	0.32	Indeterminate

112	p.Arg112Lys	1.20	0.27	Indeterminate			1.20	0.27	Indeterminate	
112	p.Arg112Thr	0.90	-0.16	Neutral			0.90	-0.16	Neutral	
112	p.Arg112Arg	1.00	0.00	Neutral			1.00	0.00	Neutral	
112	p.Arg112Ser	0.97	-0.05	Neutral			0.97	-0.05	Neutral	
112	p.Arg112Ile	1.16	0.21	Neutral			1.16	0.21	Neutral	
112	p.Arg112Met	0.66	-0.61	Neutral			0.66	-0.61	Neutral	
112	p.Arg112His	1.17	0.22	Neutral			1.17	0.22	Neutral	
112	p.Arg112Gln	1.29	0.37	Indeterminate			1.29	0.37	Indeterminate	
112	p.Arg112Pro	40.46	5.34	Deleterious			40.46	5.34	Deleterious	
112	p.Arg112Leu	1.87	0.90	Indeterminate			1.87	0.90	Indeterminate	
112	p.Arg112Asp	1.48	0.56	Indeterminate			1.48	0.56	Indeterminate	
112	p.Arg112Glu	1.80	0.85	Indeterminate			1.80	0.85	Indeterminate	
112	p.Arg112Ala	1.35	0.43	Indeterminate			1.35	0.43	Indeterminate	
112	p.Arg112Gly	2.33	1.22	Deleterious			2.33	1.22	Deleterious	
112	p.Arg112Val	1.41	0.49	Indeterminate			1.41	0.49	Indeterminate	
112	p.Arg112Tyr	1.16	0.22	Neutral			1.16	0.22	Neutral	
112	p.Arg112Cys	1.60	0.68	Indeterminate			1.60	0.68	Indeterminate	
112	p.Arg112Trp	1.15	0.20	Neutral			1.15	0.20	Neutral	
112	p.Arg112Phe	1.42	0.51	Indeterminate			1.42	0.51	Indeterminate	
113	p.Leu113Asn	1.12	0.16	Neutral	1.17	0.22	Neutral	1.14	0.19	Neutral
113	p.Leu113Lys	1.07	0.10	Neutral	0.79	-0.35	Neutral	0.93	-0.11	Neutral
113	p.Leu113Thr	1.25	0.33	Indeterminate	0.96	-0.06	Neutral	1.10	0.14	Neutral
113	p.Leu113Arg	1.23	0.30	Indeterminate	0.81	-0.31	Neutral	1.02	0.03	Neutral
113	p.Leu113Ser	1.09	0.12	Neutral	0.76	-0.39	Neutral	0.92	-0.11	Neutral
113	p.Leu113Ile	1.16	0.21	Neutral	0.66	-0.59	Neutral	0.91	-0.14	Neutral
113	p.Leu113Met	0.81	-0.30	Neutral	1.33	0.41	Indeterminate	1.07	0.10	Neutral
113	p.Leu113His	1.32	0.40	Indeterminate	1.21	0.27	Indeterminate	1.27	0.34	Indeterminate
113	p.Leu113Gln	1.06	0.09	Neutral	0.31	-1.70	Neutral	0.68	-0.55	Neutral
113	p.Leu113Pro	1.56	0.64	Indeterminate	1.38	0.47	Indeterminate	1.47	0.56	Indeterminate
113	p.Leu113Leu	1.00	0.00	Neutral	1.00	0.00	Neutral	1.00	0.00	Neutral
113	p.Leu113Asp	1.17	0.23	Neutral	0.97	-0.05	Neutral	1.07	0.10	Neutral
113	p.Leu113Glu	0.94	-0.09	Neutral	1.02	0.03	Neutral	0.98	-0.03	Neutral
113	p.Leu113Ala	1.10	0.14	Neutral	1.64	0.71	Indeterminate	1.37	0.46	Indeterminate
113	p.Leu113Gly	1.15	0.20	Neutral	1.35	0.43	Indeterminate	1.25	0.32	Indeterminate
113	p.Leu113Val	0.97	-0.04	Neutral	0.84	-0.25	Neutral	0.90	-0.15	Neutral
113	p.Leu113Tyr	1.03	0.04	Neutral	0.68	-0.56	Neutral	0.85	-0.23	Neutral
113	p.Leu113Cys	0.98	-0.03	Neutral	0.93	-0.10	Neutral	0.96	-0.06	Neutral
113	p.Leu113Trp	1.01	0.01	Neutral	1.19	0.25	Indeterminate	1.10	0.13	Neutral
113	p.Leu113Phe	1.23	0.30	Indeterminate	1.26	0.33	Indeterminate	1.24	0.31	Indeterminate
114	p.Pro114Asn	4.52	2.18	Deleterious			4.52	2.18	Deleterious	
114	p.Pro114Lys	5.61	2.49	Deleterious			5.61	2.49	Deleterious	
114	p.Pro114Thr	3.24	1.70	Deleterious			3.24	1.70	Deleterious	
114	p.Pro114Arg	4.59	2.20	Deleterious			4.59	2.20	Deleterious	
114	p.Pro114Ser	1.70	0.76	Indeterminate			1.70	0.76	Indeterminate	
114	p.Pro114Ile	5.11	2.35	Deleterious			5.11	2.35	Deleterious	
114	p.Pro114Met	5.18	2.37	Deleterious			5.18	2.37	Deleterious	
114	p.Pro114His	5.87	2.55	Deleterious			5.87	2.55	Deleterious	
114	p.Pro114Gln	5.24	2.39	Deleterious			5.24	2.39	Deleterious	
114	p.Pro114Pro	1.00	0.00	Neutral			1.00	0.00	Neutral	
114	p.Pro114Leu	5.02	2.33	Deleterious			5.02	2.33	Deleterious	
114	p.Pro114Asp	5.01	2.32	Deleterious			5.01	2.32	Deleterious	
114	p.Pro114Glu	4.76	2.25	Deleterious			4.76	2.25	Deleterious	
114	p.Pro114Ala	1.11	0.15	Neutral			1.11	0.15	Neutral	
114	p.Pro114Gly	3.25	1.70	Deleterious			3.25	1.70	Deleterious	
114	p.Pro114Val	3.00	1.59	Deleterious			3.00	1.59	Deleterious	
114	p.Pro114Tyr	5.53	2.47	Deleterious			5.53	2.47	Deleterious	
114	p.Pro114Cys	1.60	0.68	Indeterminate			1.60	0.68	Indeterminate	
114	p.Pro114Trp	4.96	2.31	Deleterious			4.96	2.31	Deleterious	
114	p.Pro114Phe	4.35	2.12	Deleterious			4.35	2.12	Deleterious	
115	p.Val115Asn	1.01	0.02	Neutral			1.01	0.02	Neutral	
115	p.Val115Lys	1.02	0.03	Neutral			1.02	0.03	Neutral	
115	p.Val115Thr	0.96	-0.05	Neutral			0.96	-0.05	Neutral	
115	p.Val115Arg	1.48	0.56	Indeterminate			1.48	0.56	Indeterminate	
115	p.Val115Ser	1.12	0.17	Neutral			1.12	0.17	Neutral	
115	p.Val115Ile	0.93	-0.10	Neutral			0.93	-0.10	Neutral	
115	p.Val115Met	0.98	-0.03	Neutral			0.98	-0.03	Neutral	
115	p.Val115His	1.17	0.22	Neutral			1.17	0.22	Neutral	
115	p.Val115Gln	1.49	0.58	Indeterminate			1.49	0.58	Indeterminate	
115	p.Val115Pro	2.46	1.30	Deleterious			2.46	1.30	Deleterious	
115	p.Val115Leu	1.20	0.27	Indeterminate			1.20	0.27	Indeterminate	
115	p.Val115Asp	1.30	0.38	Indeterminate			1.30	0.38	Indeterminate	
115	p.Val115Glu	1.20	0.27	Indeterminate			1.20	0.27	Indeterminate	
115	p.Val115Ala	1.45	0.53	Indeterminate			1.45	0.53	Indeterminate	
115	p.Val115Gly	1.21	0.28	Indeterminate			1.21	0.28	Indeterminate	
115	p.Val115Val	1.00	0.00	Neutral			1.00	0.00	Neutral	
115	p.Val115Tyr	0.96	-0.06	Neutral			0.96	-0.06	Neutral	
115	p.Val115Cys	0.94	-0.09	Neutral			0.94	-0.09	Neutral	
115	p.Val115Trp	1.07	0.10	Neutral			1.07	0.10	Neutral	
115	p.Val115Phe	1.11	0.15	Neutral			1.11	0.15	Neutral	
116	p.Asp116Asn	0.98	-0.03	Neutral			0.98	-0.03	Neutral	
116	p.Asp116Lys	0.99	-0.01	Neutral			0.99	-0.01	Neutral	
116	p.Asp116Thr	1.18	0.24	Neutral			1.18	0.24	Neutral	
116	p.Asp116Arg	1.18	0.23	Neutral			1.18	0.23	Neutral	
116	p.Asp116Ser	1.04	0.06	Neutral			1.04	0.06	Neutral	
116	p.Asp116Ile	1.19	0.25	Indeterminate			1.19	0.25	Indeterminate	
116	p.Asp116Met	0.82	-0.29	Neutral			0.82	-0.29	Neutral	
116	p.Asp116His	1.05	0.07	Neutral			1.05	0.07	Neutral	
116	p.Asp116Gln	1.04	0.06	Neutral			1.04	0.06	Neutral	
116	p.Asp116Pro	4.74	2.25	Deleterious			4.74	2.25	Deleterious	
116	p.Asp116Leu	1.09	0.13	Neutral			1.09	0.13	Neutral	
116	p.Asp116Asp	1.00	0.00	Neutral			1.00	0.00	Neutral	
116	p.Asp116Glu	1.10	0.14	Neutral			1.10	0.14	Neutral	
116	p.Asp116Ala	1.01	0.01	Neutral			1.01	0.01	Neutral	
116	p.Asp116Gly	1.47	0.56	Indeterminate			1.47	0.56	Indeterminate	
116	p.Asp116Val	1.12	0.17	Neutral			1.12	0.17	Neutral	
116	p.Asp116Tyr	0.91	-0.14	Neutral			0.91	-0.14	Neutral	
116	p.Asp116Cys	1.07	0.10	Neutral			1.07	0.10	Neutral	
116	p.Asp116Trp	1.36	0.45	Indeterminate			1.36	0.45	Indeterminate	
116	p.Asp116Phe	1.17	0.23	Neutral			1.17	0.23	Neutral	
117	p.Leu117Asn	1.03	0.04	Neutral			1.03	0.04	Neutral	
117	p.Leu117Lys	1.05	0.07	Neutral			1.05	0.07	Neutral	
117	p.Leu117Thr	0.96	-0.07	Neutral			0.96	-0.07	Neutral	
117	p.Leu117Arg	1.09	0.13	Neutral			1.09	0.13	Neutral	
117	p.Leu117Ser	1.06	0.08	Neutral			1.06	0.08	Neutral	
117	p.Leu117Ile	1.00	0.01	Neutral			1.00	0.01	Neutral	
117	p.Leu117Met	1.02	0.03	Neutral			1.02	0.03	Neutral	

117	p.Leu117His	0.84	-0.25	Neutral			0.84	-0.25	Neutral	
117	p.Leu117Gln	1.18	0.24	Indeterminate			1.18	0.24	Indeterminate	
117	p.Leu117Pro	2.26	1.18	Deleterious			2.26	1.18	Deleterious	
117	p.Leu117Leu	1.00	0.00	Neutral			1.00	0.00	Neutral	
117	p.Leu117Asp	0.97	-0.04	Neutral			0.97	-0.04	Neutral	
117	p.Leu117Glu	1.10	0.14	Neutral			1.10	0.14	Neutral	
117	p.Leu117Ala	0.95	-0.08	Neutral			0.95	-0.08	Neutral	
117	p.Leu117Gly	1.07	0.10	Neutral			1.07	0.10	Neutral	
117	p.Leu117Val	1.03	0.05	Neutral			1.03	0.05	Neutral	
117	p.Leu117Tyr	0.94	-0.09	Neutral			0.94	-0.09	Neutral	
117	p.Leu117Cys	1.10	0.14	Neutral			1.10	0.14	Neutral	
117	p.Leu117Trp	0.96	-0.06	Neutral			0.96	-0.06	Neutral	
117	p.Leu117Phe	1.05	0.07	Neutral			1.05	0.07	Neutral	
118	p.Alal18Asn	2.04	1.03	Indeterminate			2.04	1.03	Indeterminate	
118	p.Alal18Lys	2.34	1.23	Deleterious			2.34	1.23	Deleterious	
118	p.Alal18Thr	1.28	0.36	Indeterminate			1.28	0.36	Indeterminate	
118	p.Alal18Arg	2.23	1.15	Deleterious			2.23	1.15	Deleterious	
118	p.Alal18Ser	1.18	0.24	Indeterminate			1.18	0.24	Indeterminate	
118	p.Alal18Ile	1.60	0.67	Indeterminate			1.60	0.67	Indeterminate	
118	p.Alal18Met	1.74	0.80	Indeterminate			1.74	0.80	Indeterminate	
118	p.Alal18His	2.19	1.13	Deleterious			2.19	1.13	Deleterious	
118	p.Alal18Gln	2.01	1.01	Indeterminate			2.01	1.01	Indeterminate	
118	p.Alal18Pro	1.63	0.71	Indeterminate			1.63	0.71	Indeterminate	
118	p.Alal18Leu	1.46	0.55	Indeterminate			1.46	0.55	Indeterminate	
118	p.Alal18Asp	2.15	1.10	Deleterious			2.15	1.10	Deleterious	
118	p.Alal18Glu	2.11	1.08	Indeterminate			2.11	1.08	Indeterminate	
118	p.Alal18Ala	1.00	0.00	Neutral			1.00	0.00	Neutral	
118	p.Alal18Gly	0.98	-0.02	Neutral			0.98	-0.02	Neutral	
118	p.Alal18Val	1.29	0.37	Indeterminate			1.29	0.37	Indeterminate	
118	p.Alal18Tyr	2.02	1.02	Indeterminate			2.02	1.02	Indeterminate	
118	p.Alal18Cys	1.11	0.15	Neutral			1.11	0.15	Neutral	
118	p.Alal18Trp	2.40	1.26	Deleterious			2.40	1.26	Deleterious	
118	p.Alal18Phe	2.05	1.04	Indeterminate			2.05	1.04	Indeterminate	
119	p.Glu119Asn	0.89	-0.17	Neutral			0.89	-0.17	Neutral	
119	p.Glu119Lys	0.74	-0.44	Neutral			0.74	-0.44	Neutral	
119	p.Glu119Thr	0.71	-0.48	Neutral			0.71	-0.48	Neutral	
119	p.Glu119Arg	1.28	0.36	Indeterminate			1.28	0.36	Indeterminate	
119	p.Glu119Ser	0.40	-1.31	Neutral			0.40	-1.31	Neutral	
119	p.Glu119Ile	0.63	-0.67	Neutral			0.63	-0.67	Neutral	
119	p.Glu119Met	1.29	0.37	Indeterminate			1.29	0.37	Indeterminate	
119	p.Glu119His	2.07	1.05	Indeterminate			2.07	1.05	Indeterminate	
119	p.Glu119Gln	1.79	0.84	Indeterminate			1.79	0.84	Indeterminate	
119	p.Glu119Pro	2.25	1.17	Deleterious			2.25	1.17	Deleterious	
119	p.Glu119Leu	0.83	-0.27	Neutral			0.83	-0.27	Neutral	
119	p.Glu119Asp	1.38	0.46	Indeterminate			1.38	0.46	Indeterminate	
119	p.Glu119Glu	1.00	0.00	Neutral			1.00	0.00	Neutral	
119	p.Glu119Ala	0.53	-0.90	Neutral			0.53	-0.90	Neutral	
119	p.Glu119Gly	0.89	-0.16	Neutral			0.89	-0.16	Neutral	
119	p.Glu119Val	1.27	0.35	Indeterminate			1.27	0.35	Indeterminate	
119	p.Glu119Tyr	0.42	-1.26	Neutral			0.42	-1.26	Neutral	
119	p.Glu119Cys	0.49	-1.04	Neutral			0.49	-1.04	Neutral	
119	p.Glu119Trp	2.09	1.06	Indeterminate			2.09	1.06	Indeterminate	
119	p.Glu119Phe	2.16	1.11	Deleterious			2.16	1.11	Deleterious	
120	p.Glu120Asn	1.20	0.26	Indeterminate	1.02	0.03	Neutral	1.11	0.15	Neutral
120	p.Glu120Lys	1.07	0.09	Neutral	1.01	0.02	Neutral	1.04	0.06	Neutral
120	p.Glu120Thr	1.11	0.15	Neutral	0.76	-0.40	Neutral	0.93	-0.10	Neutral
120	p.Glu120Arg	1.11	0.15	Neutral	1.01	0.01	Neutral	1.06	0.08	Neutral
120	p.Glu120Ser	1.05	0.07	Neutral	0.81	-0.30	Neutral	0.93	-0.10	Neutral
120	p.Glu120Ile	1.36	0.44	Indeterminate	0.91	-0.14	Neutral	1.13	0.18	Neutral
120	p.Glu120Met	1.43	0.52	Indeterminate	1.02	0.03	Neutral	1.23	0.29	Indeterminate
120	p.Glu120His	1.10	0.14	Neutral	1.06	0.08	Neutral	1.08	0.11	Neutral
120	p.Glu120Gln	1.24	0.31	Indeterminate	1.00	0.00	Neutral	1.12	0.17	Neutral
120	p.Glu120Pro	1.20	0.27	Indeterminate	0.87	-0.20	Neutral	1.04	0.05	Neutral
120	p.Glu120Leu	0.92	-0.11	Neutral	0.95	-0.08	Neutral	0.94	-0.10	Neutral
120	p.Glu120Asp	1.13	0.17	Neutral	1.05	0.07	Neutral	1.09	0.12	Neutral
120	p.Glu120Glu	1.00	0.00	Neutral	1.00	0.00	Neutral	1.00	0.00	Neutral
120	p.Glu120Ala	1.03	0.04	Neutral	0.65	-0.62	Neutral	0.84	-0.25	Neutral
120	p.Glu120Gly	1.08	0.11	Neutral	0.76	-0.40	Neutral	0.92	-0.13	Neutral
120	p.Glu120Val	1.11	0.16	Neutral	0.96	-0.06	Neutral	1.04	0.05	Neutral
120	p.Glu120Tyr	1.05	0.07	Neutral	1.08	0.11	Neutral	1.06	0.09	Neutral
120	p.Glu120Cys	1.16	0.21	Neutral	0.99	-0.02	Neutral	1.07	0.10	Neutral
120	p.Glu120Trp	1.24	0.31	Indeterminate	0.86	-0.23	Neutral	1.05	0.07	Neutral
120	p.Glu120Phe	1.03	0.04	Neutral	0.85	-0.24	Neutral	0.94	-0.10	Neutral
121	p.Leu121Asn	1.30	0.38	Indeterminate			1.30	0.38	Indeterminate	
121	p.Leu121Lys	1.12	0.16	Neutral			1.12	0.16	Neutral	
121	p.Leu121Thr	1.18	0.24	Indeterminate			1.18	0.24	Indeterminate	
121	p.Leu121Arg	1.76	0.81	Indeterminate			1.76	0.81	Indeterminate	
121	p.Leu121Ser	1.14	0.19	Neutral			1.14	0.19	Neutral	
121	p.Leu121Ile	1.13	0.18	Neutral			1.13	0.18	Neutral	
121	p.Leu121Met	4.46	2.16	Deleterious			4.46	2.16	Deleterious	
121	p.Leu121His	0.92	-0.12	Neutral			0.92	-0.12	Neutral	
121	p.Leu121Gln	1.09	0.12	Neutral			1.09	0.12	Neutral	
121	p.Leu121Pro	0.96	-0.05	Neutral			0.96	-0.05	Neutral	
121	p.Leu121Leu	1.00	0.00	Neutral			1.00	0.00	Neutral	
121	p.Leu121Asp	0.65	-0.62	Neutral			0.65	-0.62	Neutral	
121	p.Leu121Glu	1.42	0.50	Indeterminate			1.42	0.50	Indeterminate	
121	p.Leu121Ala	1.14	0.19	Neutral			1.14	0.19	Neutral	
121	p.Leu121Gly	1.36	0.45	Indeterminate			1.36	0.45	Indeterminate	
121	p.Leu121Val	0.84	-0.25	Neutral			0.84	-0.25	Neutral	
121	p.Leu121Tyr	0.74	-0.43	Neutral			0.74	-0.43	Neutral	
121	p.Leu121Cys	0.91	-0.13	Neutral			0.91	-0.13	Neutral	
121	p.Leu121Trp	1.32	0.40	Indeterminate			1.32	0.40	Indeterminate	
121	p.Leu121Phe	0.99	-0.02	Neutral			0.99	-0.02	Neutral	
122	p.Gly122Asn	0.93	-0.11	Neutral	0.50	-0.99	Neutral	0.71	-0.48	Neutral
122	p.Gly122Lys	1.13	0.18	Neutral	0.59	-0.76	Neutral	0.86	-0.21	Neutral
122	p.Gly122Thr	1.04	0.06	Neutral	0.78	-0.35	Neutral	0.91	-0.13	Neutral
122	p.Gly122Arg	1.30	0.38	Indeterminate	1.17	0.23	Neutral	1.24	0.31	Indeterminate
122	p.Gly122Ser	0.94	-0.10	Neutral	0.78	-0.36	Neutral	0.86	-0.22	Neutral
122	p.Gly122Ile	1.30	0.37	Indeterminate	0.68	-0.56	Neutral	0.99	-0.02	Neutral
122	p.Gly122Met	0.97	-0.05	Neutral	0.99	-0.02	Neutral	0.98	-0.03	Neutral
122	p.Gly122His	0.95	-0.08	Neutral	0.88	-0.19	Neutral	0.91	-0.13	Neutral
122	p.Gly122Gln	1.03	0.04	Neutral	0.63	-0.67	Neutral	0.83	-0.27	Neutral
122	p.Gly122Pro	0.99	-0.01	Neutral	1.24	0.31	Indeterminate	1.12	0.16	Neutral
122	p.Gly122Leu	1.10	0.14	Neutral	0.65	-0.61	Neutral	0.88	-0.19	Neutral
122	p.Gly122Asp	1.08	0.12	Neutral	0.63	-0.67	Neutral	0.86	-0.23	Neutral
122	p.Gly122Glu	1.17	0.23	Neutral	0.65	-0.61	Neutral	0.91	-0.13	Neutral

127	p.Alal27Phe	1.36	0.44	Indeterminate	1.36	0.44	Indeterminate
128	p.Arg128Asn	0.38	-1.40	Neutral	0.38	-1.40	Neutral
128	p.Arg128Lys	0.98	-0.03	Neutral	0.98	-0.03	Neutral
128	p.Arg128Thr	0.73	-0.46	Neutral	0.73	-0.46	Neutral
128	p.Arg128Arg	1.00	0.00	Neutral	1.00	0.00	Neutral
128	p.Arg128Ser	1.43	0.51	Indeterminate	1.43	0.51	Indeterminate
128	p.Arg128Ile	1.28	0.35	Indeterminate	1.28	0.35	Indeterminate
128	p.Arg128Met	0.83	-0.26	Neutral	0.83	-0.26	Neutral
128	p.Arg128His	0.86	-0.22	Neutral	0.86	-0.22	Neutral
128	p.Arg128Gln	0.60	-0.74	Neutral	0.60	-0.74	Neutral
128	p.Arg128Pro	2.66	1.41	Deleterious	2.66	1.41	Deleterious
128	p.Arg128Leu	0.74	-0.43	Neutral	0.74	-0.43	Neutral
128	p.Arg128Asp	0.65	-0.61	Neutral	0.65	-0.61	Neutral
128	p.Arg128Glu	0.88	-0.18	Neutral	0.88	-0.18	Neutral
128	p.Arg128Ala	0.74	-0.44	Neutral	0.74	-0.44	Neutral
128	p.Arg128Gly	1.19	0.26	Indeterminate	1.19	0.26	Indeterminate
128	p.Arg128Val	0.65	-0.63	Neutral	0.65	-0.63	Neutral
128	p.Arg128Tyr	0.78	-0.35	Neutral	0.78	-0.35	Neutral
128	p.Arg128Cys	0.51	-0.97	Neutral	0.51	-0.97	Neutral
128	p.Arg128Trp	0.67	-0.58	Neutral	0.67	-0.58	Neutral
128	p.Arg128Phe	1.20	0.26	Indeterminate	1.20	0.26	Indeterminate
129	p.Tyr129Asn	2.40	1.26	Deleterious	2.40	1.26	Deleterious
129	p.Tyr129Lys	1.31	0.39	Indeterminate	1.31	0.39	Indeterminate
129	p.Tyr129Thr	1.99	0.99	Indeterminate	1.99	0.99	Indeterminate
129	p.Tyr129Arg	1.07	0.10	Neutral	1.07	0.10	Neutral
129	p.Tyr129Ser	1.08	0.11	Neutral	1.08	0.11	Neutral
129	p.Tyr129Ile	1.40	0.49	Indeterminate	1.40	0.49	Indeterminate
129	p.Tyr129Met	0.98	-0.03	Neutral	0.98	-0.03	Neutral
129	p.Tyr129His	1.07	0.10	Neutral	1.07	0.10	Neutral
129	p.Tyr129Gln	1.09	0.12	Neutral	1.09	0.12	Neutral
129	p.Tyr129Pro	8.53	3.09	Deleterious	8.53	3.09	Deleterious
129	p.Tyr129Leu	0.89	-0.17	Neutral	0.89	-0.17	Neutral
129	p.Tyr129Asp	2.12	1.09	Indeterminate	2.12	1.09	Indeterminate
129	p.Tyr129Glu	1.00	0.01	Neutral	1.00	0.01	Neutral
129	p.Tyr129Ala	1.12	0.16	Neutral	1.12	0.16	Neutral
129	p.Tyr129Gly	1.39	0.47	Indeterminate	1.39	0.47	Indeterminate
129	p.Tyr129Val	1.17	0.23	Neutral	1.17	0.23	Neutral
129	p.Tyr129Tyr	1.00	0.00	Neutral	1.00	0.00	Neutral
129	p.Tyr129Cys	1.07	0.10	Neutral	1.07	0.10	Neutral
129	p.Tyr129Trp	0.89	-0.16	Neutral	0.89	-0.16	Neutral
129	p.Tyr129Phe	1.17	0.23	Neutral	1.17	0.23	Neutral
130	p.Leu130Asn	1.95	0.96	Indeterminate	1.95	0.96	Indeterminate
130	p.Leu130Lys	3.66	1.87	Deleterious	3.66	1.87	Deleterious
130	p.Leu130Thr	1.07	0.10	Neutral	1.07	0.10	Neutral
130	p.Leu130Arg	3.66	1.87	Deleterious	3.66	1.87	Deleterious
130	p.Leu130Ser	1.22	0.29	Indeterminate	1.22	0.29	Indeterminate
130	p.Leu130Ile	0.91	-0.13	Neutral	0.91	-0.13	Neutral
130	p.Leu130Met	0.93	-0.11	Neutral	0.93	-0.11	Neutral
130	p.Leu130His	1.79	0.84	Indeterminate	1.79	0.84	Indeterminate
130	p.Leu130Gln	1.73	0.79	Indeterminate	1.73	0.79	Indeterminate
130	p.Leu130Pro	3.71	1.89	Deleterious	3.71	1.89	Deleterious
130	p.Leu130Leu	1.00	0.00	Neutral	1.00	0.00	Neutral
130	p.Leu130Asp	2.94	1.56	Deleterious	2.94	1.56	Deleterious
130	p.Leu130Glu	2.74	1.46	Deleterious	2.74	1.46	Deleterious
130	p.Leu130Ala	1.05	0.07	Neutral	1.05	0.07	Neutral
130	p.Leu130Gly	1.08	0.12	Neutral	1.08	0.12	Neutral
130	p.Leu130Val	0.87	-0.20	Neutral	0.87	-0.20	Neutral
130	p.Leu130Tyr	1.08	0.12	Neutral	1.08	0.12	Neutral
130	p.Leu130Cys	1.06	0.09	Neutral	1.06	0.09	Neutral
130	p.Leu130Trp	1.20	0.26	Indeterminate	1.20	0.26	Indeterminate
130	p.Leu130Phe	1.00	0.00	Neutral	1.00	0.00	Neutral
131	p.Arg131Asn	0.97	-0.05	Neutral	0.97	-0.05	Neutral
131	p.Arg131Lys	0.83	-0.27	Neutral	0.83	-0.27	Neutral
131	p.Arg131Thr	1.74	0.80	Indeterminate	1.74	0.80	Indeterminate
131	p.Arg131Arg	1.00	0.00	Neutral	1.00	0.00	Neutral
131	p.Arg131Ser	1.12	0.16	Neutral	1.12	0.16	Neutral
131	p.Arg131Ile	0.86	-0.21	Neutral	0.86	-0.21	Neutral
131	p.Arg131Met	0.99	-0.01	Neutral	0.99	-0.01	Neutral
131	p.Arg131His	1.13	0.18	Neutral	1.13	0.18	Neutral
131	p.Arg131Gln	2.44	1.28	Deleterious	2.44	1.28	Deleterious
131	p.Arg131Pro	2.12	1.08	Indeterminate	2.12	1.08	Indeterminate
131	p.Arg131Leu	0.76	-0.40	Neutral	0.76	-0.40	Neutral
131	p.Arg131Asp	0.78	-0.37	Neutral	0.78	-0.37	Neutral
131	p.Arg131Glu	0.87	-0.20	Neutral	0.87	-0.20	Neutral
131	p.Arg131Ala	1.15	0.21	Neutral	1.15	0.21	Neutral
131	p.Arg131Gly	1.02	0.02	Neutral	1.02	0.02	Neutral
131	p.Arg131Val	0.90	-0.16	Neutral	0.90	-0.16	Neutral
131	p.Arg131Tyr	0.94	-0.10	Neutral	0.94	-0.10	Neutral
131	p.Arg131Cys	3.75	1.91	Deleterious	3.75	1.91	Deleterious
131	p.Arg131Trp	1.21	0.28	Indeterminate	1.21	0.28	Indeterminate
131	p.Arg131Phe	0.69	-0.53	Neutral	0.69	-0.53	Neutral
132	p.Alal32Asn	2.18	1.12	Deleterious	2.18	1.12	Deleterious
132	p.Alal32Lys	1.27	0.35	Indeterminate	1.27	0.35	Indeterminate
132	p.Alal32Thr	1.19	0.25	Indeterminate	1.19	0.25	Indeterminate
132	p.Alal32Arg	1.18	0.24	Neutral	1.18	0.24	Neutral
132	p.Alal32Ser	2.27	1.18	Deleterious	2.27	1.18	Deleterious
132	p.Alal32Ile	1.48	0.56	Indeterminate	1.48	0.56	Indeterminate
132	p.Alal32Met	1.34	0.42	Indeterminate	1.34	0.42	Indeterminate
132	p.Alal32His	1.66	0.73	Indeterminate	1.66	0.73	Indeterminate
132	p.Alal32Gln	1.21	0.27	Indeterminate	1.21	0.27	Indeterminate
132	p.Alal32Pro	1.19	0.25	Indeterminate	1.19	0.25	Indeterminate
132	p.Alal32Leu	1.52	0.60	Indeterminate	1.52	0.60	Indeterminate
132	p.Alal32Asp	1.96	0.97	Indeterminate	1.96	0.97	Indeterminate
132	p.Alal32Glu	1.51	0.60	Indeterminate	1.51	0.60	Indeterminate
132	p.Alal32Ala	1.00	0.00	Neutral	1.00	0.00	Neutral
132	p.Alal32Gly	5.74	2.52	Deleterious	5.74	2.52	Deleterious
132	p.Alal32Val	1.35	0.44	Indeterminate	1.35	0.44	Indeterminate
132	p.Alal32Tyr	1.42	0.51	Indeterminate	1.42	0.51	Indeterminate
132	p.Alal32Cys	1.93	0.95	Indeterminate	1.93	0.95	Indeterminate
132	p.Alal32Trp	1.27	0.34	Indeterminate	1.27	0.34	Indeterminate
132	p.Alal32Phe	1.19	0.25	Indeterminate	1.19	0.25	Indeterminate
133	p.Alal33Asn	0.69	-0.53	Neutral	0.69	-0.53	Neutral
133	p.Alal33Lys	0.77	-0.38	Neutral	0.77	-0.38	Neutral
133	p.Alal33Thr	0.79	-0.34	Neutral	0.79	-0.34	Neutral
133	p.Alal33Arg	1.09	0.13	Neutral	1.09	0.13	Neutral
133	p.Alal33Ser	0.90	-0.15	Neutral	0.90	-0.15	Neutral

138	p.Arg138Asp	0.97	-0.05	Neutral			0.97	-0.05	Neutral	
138	p.Arg138Glu	0.94	-0.08	Neutral			0.94	-0.08	Neutral	
138	p.Arg138Ala	0.58	-0.80	Neutral			0.58	-0.80	Neutral	
138	p.Arg138Gly	0.96	-0.06	Neutral			0.96	-0.06	Neutral	
138	p.Arg138Val	0.90	-0.15	Neutral			0.90	-0.15	Neutral	
138	p.Arg138Tyr	0.72	-0.47	Neutral			0.72	-0.47	Neutral	
138	p.Arg138Cys	0.86	-0.22	Neutral			0.86	-0.22	Neutral	
138	p.Arg138Trp	0.81	-0.31	Neutral			0.81	-0.31	Neutral	
138	p.Arg138Phe	0.89	-0.18	Neutral			0.89	-0.18	Neutral	
139	p.Gly139Asn	0.98	-0.04	Neutral	1.01	0.02	Neutral	1.00	-0.01	Neutral
139	p.Gly139Lys	1.05	0.08	Neutral	1.28	0.36	Indeterminate	1.17	0.23	Neutral
139	p.Gly139Thr	0.88	-0.19	Neutral	1.27	0.35	Indeterminate	1.07	0.10	Neutral
139	p.Gly139Arg	0.87	-0.20	Neutral	1.15	0.20	Neutral	1.01	0.01	Neutral
139	p.Gly139Ser	1.20	0.27	Indeterminate	1.26	0.33	Indeterminate	1.23	0.30	Indeterminate
139	p.Gly139Ile	0.99	-0.02	Neutral	1.18	0.23	Neutral	1.08	0.11	Neutral
139	p.Gly139Met	1.14	0.19	Neutral	1.24	0.31	Indeterminate	1.19	0.25	Indeterminate
139	p.Gly139His	0.88	-0.18	Neutral	1.12	0.16	Neutral	1.00	0.00	Neutral
139	p.Gly139Gln	0.93	-0.11	Neutral	1.02	0.03	Neutral	0.98	-0.04	Neutral
139	p.Gly139Pro	1.30	0.38	Indeterminate	0.92	-0.12	Neutral	1.11	0.15	Neutral
139	p.Gly139Leu	0.85	-0.24	Neutral	1.34	0.42	Indeterminate	1.09	0.13	Neutral
139	p.Gly139Asp	0.89	-0.16	Neutral	1.37	0.46	Indeterminate	1.13	0.18	Neutral
139	p.Gly139Glu	1.12	0.16	Neutral	1.24	0.31	Indeterminate	1.18	0.24	Neutral
139	p.Gly139Ala	0.80	-0.32	Neutral	1.38	0.46	Indeterminate	1.09	0.12	Neutral
139	p.Gly139Gly	1.00	0.00	Neutral	1.00	0.00	Neutral	1.00	0.00	Neutral
139	p.Gly139Val	0.89	-0.17	Neutral	1.04	0.05	Neutral	0.96	-0.06	Neutral
139	p.Gly139Tyr	1.38	0.46	Indeterminate	1.35	0.43	Indeterminate	1.36	0.45	Indeterminate
139	p.Gly139Cys	0.86	-0.23	Neutral	1.03	0.04	Neutral	0.94	-0.09	Neutral
139	p.Gly139Trp	0.91	-0.14	Neutral	1.18	0.23	Neutral	1.04	0.06	Neutral
139	p.Gly139Phe	1.15	0.20	Neutral	1.30	0.37	Indeterminate	1.22	0.29	Indeterminate
140	p.Ser140Asn	1.02	0.03	Neutral				1.02	0.03	Neutral
140	p.Ser140Lys	0.95	-0.08	Neutral				0.95	-0.08	Neutral
140	p.Ser140Thr	0.98	-0.02	Neutral				0.98	-0.02	Neutral
140	p.Ser140Arg	1.18	0.23	Neutral				1.18	0.23	Neutral
140	p.Ser140Ser	1.00	0.00	Neutral				1.00	0.00	Neutral
140	p.Ser140Ile	0.95	-0.08	Neutral				0.95	-0.08	Neutral
140	p.Ser140Met	0.94	-0.08	Neutral				0.94	-0.08	Neutral
140	p.Ser140His	1.04	0.06	Neutral				1.04	0.06	Neutral
140	p.Ser140Gln	0.99	-0.02	Neutral				0.99	-0.02	Neutral
140	p.Ser140Pro	1.20	0.27	Indeterminate				1.20	0.27	Indeterminate
140	p.Ser140Leu	0.90	-0.15	Neutral				0.90	-0.15	Neutral
140	p.Ser140Asp	0.98	-0.03	Neutral				0.98	-0.03	Neutral
140	p.Ser140Glu	0.90	-0.16	Neutral				0.90	-0.16	Neutral
140	p.Ser140Ala	1.07	0.09	Neutral				1.07	0.09	Neutral
140	p.Ser140Gly	1.28	0.36	Indeterminate				1.28	0.36	Indeterminate
140	p.Ser140Val	0.97	-0.04	Neutral				0.97	-0.04	Neutral
140	p.Ser140Tyr	1.10	0.14	Neutral				1.10	0.14	Neutral
140	p.Ser140Cys	1.03	0.05	Neutral				1.03	0.05	Neutral
140	p.Ser140Trp	0.98	-0.03	Neutral				0.98	-0.03	Neutral
140	p.Ser140Phe	0.92	-0.12	Neutral				0.92	-0.12	Neutral
141	p.Asn141Asn	1.00	0.00	Neutral				1.00	0.00	Neutral
141	p.Asn141Lys	0.78	-0.36	Neutral				0.78	-0.36	Neutral
141	p.Asn141Thr	0.98	-0.03	Neutral				0.98	-0.03	Neutral
141	p.Asn141Arg	0.97	-0.04	Neutral				0.97	-0.04	Neutral
141	p.Asn141Ser	0.84	-0.25	Neutral				0.84	-0.25	Neutral
141	p.Asn141Ile	0.95	-0.08	Neutral				0.95	-0.08	Neutral
141	p.Asn141Met	0.92	-0.13	Neutral				0.92	-0.13	Neutral
141	p.Asn141His	0.86	-0.21	Neutral				0.86	-0.21	Neutral
141	p.Asn141Gln	1.01	0.01	Neutral				1.01	0.01	Neutral
141	p.Asn141Pro	0.87	-0.21	Neutral				0.87	-0.21	Neutral
141	p.Asn141Leu	0.86	-0.22	Neutral				0.86	-0.22	Neutral
141	p.Asn141Asp	0.92	-0.12	Neutral				0.92	-0.12	Neutral
141	p.Asn141Glu	0.97	-0.05	Neutral				0.97	-0.05	Neutral
141	p.Asn141Ala	0.90	-0.14	Neutral				0.90	-0.14	Neutral
141	p.Asn141Gly	0.88	-0.18	Neutral				0.88	-0.18	Neutral
141	p.Asn141Val	0.85	-0.24	Neutral				0.85	-0.24	Neutral
141	p.Asn141Tyr	0.87	-0.20	Neutral				0.87	-0.20	Neutral
141	p.Asn141Cys	0.87	-0.20	Neutral				0.87	-0.20	Neutral
141	p.Asn141Trp	0.87	-0.20	Neutral				0.87	-0.20	Neutral
141	p.Asn141Phe	0.95	-0.07	Neutral				0.95	-0.07	Neutral
142	p.His142Asn	0.97	-0.05	Neutral				0.97	-0.05	Neutral
142	p.His142Lys	1.05	0.08	Neutral				1.05	0.08	Neutral
142	p.His142Thr	1.08	0.11	Neutral				1.08	0.11	Neutral
142	p.His142Arg	0.81	-0.30	Neutral				0.81	-0.30	Neutral
142	p.His142Ser	0.96	-0.06	Neutral				0.96	-0.06	Neutral
142	p.His142Ile	0.96	-0.06	Neutral				0.96	-0.06	Neutral
142	p.His142Met	0.99	-0.02	Neutral				0.99	-0.02	Neutral
142	p.His142His	1.00	0.00	Neutral				1.00	0.00	Neutral
142	p.His142Gln	1.09	0.12	Neutral				1.09	0.12	Neutral
142	p.His142Pro	0.95	-0.07	Neutral				0.95	-0.07	Neutral
142	p.His142Leu	0.91	-0.14	Neutral				0.91	-0.14	Neutral
142	p.His142Asp	1.09	0.12	Neutral				1.09	0.12	Neutral
142	p.His142Glu	0.97	-0.04	Neutral				0.97	-0.04	Neutral
142	p.His142Ala	0.96	-0.05	Neutral				0.96	-0.05	Neutral
142	p.His142Gly	0.94	-0.09	Neutral				0.94	-0.09	Neutral
142	p.His142Val	1.01	0.02	Neutral				1.01	0.02	Neutral
142	p.His142Tyr	0.90	-0.15	Neutral				0.90	-0.15	Neutral
142	p.His142Cys	0.96	-0.05	Neutral				0.96	-0.05	Neutral
142	p.His142Trp	0.91	-0.13	Neutral				0.91	-0.13	Neutral
142	p.His142Phe	1.12	0.17	Neutral				1.12	0.17	Neutral
143	p.Ala143Asn	1.00	0.01	Neutral				1.00	0.01	Neutral
143	p.Ala143Lys	0.97	-0.05	Neutral				0.97	-0.05	Neutral
143	p.Ala143Thr	0.96	-0.06	Neutral				0.96	-0.06	Neutral
143	p.Ala143Arg	0.97	-0.05	Neutral				0.97	-0.05	Neutral
143	p.Ala143Ser	0.93	-0.10	Neutral				0.93	-0.10	Neutral
143	p.Ala143Ile	0.92	-0.12	Neutral				0.92	-0.12	Neutral
143	p.Ala143Met	0.98	-0.02	Neutral				0.98	-0.02	Neutral
143	p.Ala143His	0.99	-0.02	Neutral				0.99	-0.02	Neutral
143	p.Ala143Gln	1.00	0.00	Neutral				1.00	0.00	Neutral
143	p.Ala143Pro	1.02	0.03	Neutral				1.02	0.03	Neutral
143	p.Ala143Leu	0.95	-0.08	Neutral				0.95	-0.08	Neutral
143	p.Ala143Asp	0.91	-0.13	Neutral				0.91	-0.13	Neutral
143	p.Ala143Glu	0.98	-0.03	Neutral				0.98	-0.03	Neutral
143	p.Ala143Ala	1.00	0.00	Neutral				1.00	0.00	Neutral
143	p.Ala143Gly	1.03	0.04	Neutral				1.03	0.04	Neutral
143	p.Ala143Val	0.96	-0.05	Neutral				0.96	-0.05	Neutral
143	p.Ala143Tyr	1.01	0.02	Neutral				1.01	0.02	Neutral

143	p.Ala143Cys	1.04	0.06	Neutral	1.04	0.06	Neutral
143	p.Ala143Trp	1.09	0.13	Neutral	1.09	0.13	Neutral
143	p.Ala143Phe	1.01	0.01	Neutral	1.01	0.01	Neutral
144	p.Arg144Asn	0.88	-0.18	Neutral	0.88	-0.18	Neutral
144	p.Arg144Lys	0.90	-0.15	Neutral	0.90	-0.15	Neutral
144	p.Arg144Thr	0.89	-0.16	Neutral	0.89	-0.16	Neutral
144	p.Arg144Arg	1.00	0.00	Neutral	1.00	0.00	Neutral
144	p.Arg144Ser	0.88	-0.18	Neutral	0.88	-0.18	Neutral
144	p.Arg144Ile	0.92	-0.11	Neutral	0.92	-0.11	Neutral
144	p.Arg144Met	0.89	-0.17	Neutral	0.89	-0.17	Neutral
144	p.Arg144His	0.92	-0.13	Neutral	0.92	-0.13	Neutral
144	p.Arg144Gln	0.95	-0.07	Neutral	0.95	-0.07	Neutral
144	p.Arg144Pro	0.90	-0.15	Neutral	0.90	-0.15	Neutral
144	p.Arg144Leu	0.96	-0.06	Neutral	0.96	-0.06	Neutral
144	p.Arg144Asp	0.89	-0.16	Neutral	0.89	-0.16	Neutral
144	p.Arg144Glu	0.96	-0.07	Neutral	0.96	-0.07	Neutral
144	p.Arg144Ala	0.95	-0.08	Neutral	0.95	-0.08	Neutral
144	p.Arg144Gly	0.97	-0.05	Neutral	0.97	-0.05	Neutral
144	p.Arg144Val	0.91	-0.14	Neutral	0.91	-0.14	Neutral
144	p.Arg144Tyr	0.91	-0.14	Neutral	0.91	-0.14	Neutral
144	p.Arg144Cys	0.84	-0.25	Neutral	0.84	-0.25	Neutral
144	p.Arg144Trp	0.91	-0.13	Neutral	0.91	-0.13	Neutral
144	p.Arg144Phe	0.90	-0.15	Neutral	0.90	-0.15	Neutral
145	p.Ile145Asn	0.99	-0.02	Neutral	0.99	-0.02	Neutral
145	p.Ile145Lys	1.13	0.18	Neutral	1.13	0.18	Neutral
145	p.Ile145Thr	1.05	0.07	Neutral	1.05	0.07	Neutral
145	p.Ile145Arg	1.18	0.24	Indeterminate	1.18	0.24	Indeterminate
145	p.Ile145Ser	1.11	0.15	Neutral	1.11	0.15	Neutral
145	p.Ile145Ile	1.00	0.00	Neutral	1.00	0.00	Neutral
145	p.Ile145Met	1.21	0.28	Indeterminate	1.21	0.28	Indeterminate
145	p.Ile145His	0.94	-0.08	Neutral	0.94	-0.08	Neutral
145	p.Ile145Gln	1.10	0.14	Neutral	1.10	0.14	Neutral
145	p.Ile145Pro	0.97	-0.04	Neutral	0.97	-0.04	Neutral
145	p.Ile145Leu	1.04	0.05	Neutral	1.04	0.05	Neutral
145	p.Ile145Asp	1.04	0.05	Neutral	1.04	0.05	Neutral
145	p.Ile145Glu	1.05	0.06	Neutral	1.05	0.06	Neutral
145	p.Ile145Ala	1.15	0.20	Neutral	1.15	0.20	Neutral
145	p.Ile145Gly	0.98	-0.03	Neutral	0.98	-0.03	Neutral
145	p.Ile145Val	1.13	0.17	Neutral	1.13	0.17	Neutral
145	p.Ile145Tyr	1.02	0.03	Neutral	1.02	0.03	Neutral
145	p.Ile145Cys	0.92	-0.12	Neutral	0.92	-0.12	Neutral
145	p.Ile145Trp	1.04	0.05	Neutral	1.04	0.05	Neutral
145	p.Ile145Phe	0.98	-0.03	Neutral	0.98	-0.03	Neutral
146	p.Asp146Asn	1.05	0.07	Neutral	1.05	0.07	Neutral
146	p.Asp146Lys	0.78	-0.36	Neutral	0.78	-0.36	Neutral
146	p.Asp146Thr	0.95	-0.07	Neutral	0.95	-0.07	Neutral
146	p.Asp146Arg	0.95	-0.07	Neutral	0.95	-0.07	Neutral
146	p.Asp146Ser	0.88	-0.18	Neutral	0.88	-0.18	Neutral
146	p.Asp146Ile	0.79	-0.33	Neutral	0.79	-0.33	Neutral
146	p.Asp146Met	0.96	-0.05	Neutral	0.96	-0.05	Neutral
146	p.Asp146His	1.01	0.01	Neutral	1.01	0.01	Neutral
146	p.Asp146Gln	0.98	-0.03	Neutral	0.98	-0.03	Neutral
146	p.Asp146Pro	1.00	0.00	Neutral	1.00	0.00	Neutral
146	p.Asp146Leu	0.93	-0.11	Neutral	0.93	-0.11	Neutral
146	p.Asp146Asp	1.00	0.00	Neutral	1.00	0.00	Neutral
146	p.Asp146Glu	0.87	-0.20	Neutral	0.87	-0.20	Neutral
146	p.Asp146Ala	0.86	-0.22	Neutral	0.86	-0.22	Neutral
146	p.Asp146Gly	0.86	-0.22	Neutral	0.86	-0.22	Neutral
146	p.Asp146Val	0.86	-0.21	Neutral	0.86	-0.21	Neutral
146	p.Asp146Tyr	1.00	0.00	Neutral	1.00	0.00	Neutral
146	p.Asp146Cys	1.01	0.02	Neutral	1.01	0.02	Neutral
146	p.Asp146Trp	0.85	-0.23	Neutral	0.85	-0.23	Neutral
146	p.Asp146Phe	1.03	0.05	Neutral	1.03	0.05	Neutral
147	p.Ala147Asn	1.05	0.07	Neutral	1.05	0.07	Neutral
147	p.Ala147Lys	0.91	-0.13	Neutral	0.91	-0.13	Neutral
147	p.Ala147Thr	1.03	0.04	Neutral	1.03	0.04	Neutral
147	p.Ala147Arg	0.91	-0.14	Neutral	0.91	-0.14	Neutral
147	p.Ala147Ser	0.91	-0.14	Neutral	0.91	-0.14	Neutral
147	p.Ala147Ile	1.12	0.16	Neutral	1.12	0.16	Neutral
147	p.Ala147Met	1.08	0.11	Neutral	1.08	0.11	Neutral
147	p.Ala147His	0.89	-0.17	Neutral	0.89	-0.17	Neutral
147	p.Ala147Gln	1.42	0.50	Indeterminate	1.42	0.50	Indeterminate
147	p.Ala147Pro	0.88	-0.18	Neutral	0.88	-0.18	Neutral
147	p.Ala147Leu	1.07	0.09	Neutral	1.07	0.09	Neutral
147	p.Ala147Asp	1.12	0.17	Neutral	1.12	0.17	Neutral
147	p.Ala147Glu	0.94	-0.09	Neutral	0.94	-0.09	Neutral
147	p.Ala147Ala	1.00	0.00	Neutral	1.00	0.00	Neutral
147	p.Ala147Gly	0.98	-0.03	Neutral	0.98	-0.03	Neutral
147	p.Ala147Val	1.04	0.06	Neutral	1.04	0.06	Neutral
147	p.Ala147Tyr	0.89	-0.16	Neutral	0.89	-0.16	Neutral
147	p.Ala147Cys	0.92	-0.12	Neutral	0.92	-0.12	Neutral
147	p.Ala147Trp	0.93	-0.10	Neutral	0.93	-0.10	Neutral
147	p.Ala147Phe	0.89	-0.16	Neutral	0.89	-0.16	Neutral
148	p.Ala148Asn	1.32	0.40	Indeterminate	1.32	0.40	Indeterminate
148	p.Ala148Lys	2.00	1.00	Indeterminate	2.00	1.00	Indeterminate
148	p.Ala148Thr	0.92	-0.12	Neutral	0.92	-0.12	Neutral
148	p.Ala148Arg	1.44	0.53	Indeterminate	1.44	0.53	Indeterminate
148	p.Ala148Ser	1.08	0.11	Neutral	1.08	0.11	Neutral
148	p.Ala148Ile	1.15	0.20	Neutral	1.15	0.20	Neutral
148	p.Ala148Met	1.54	0.62	Indeterminate	1.54	0.62	Indeterminate
148	p.Ala148His	1.27	0.34	Indeterminate	1.27	0.34	Indeterminate
148	p.Ala148Gln	1.31	0.39	Indeterminate	1.31	0.39	Indeterminate
148	p.Ala148Pro	1.19	0.25	Indeterminate	1.19	0.25	Indeterminate
148	p.Ala148Leu	1.21	0.27	Indeterminate	1.21	0.27	Indeterminate
148	p.Ala148Asp	1.27	0.35	Indeterminate	1.27	0.35	Indeterminate
148	p.Ala148Glu	1.39	0.47	Indeterminate	1.39	0.47	Indeterminate
148	p.Ala148Ala	1.00	0.00	Neutral	1.00	0.00	Neutral
148	p.Ala148Gly	1.01	0.01	Neutral	1.01	0.01	Neutral
148	p.Ala148Val	1.55	0.63	Indeterminate	1.55	0.63	Indeterminate
148	p.Ala148Tyr	0.94	-0.09	Neutral	0.94	-0.09	Neutral
148	p.Ala148Cys	0.66	-0.60	Neutral	0.66	-0.60	Neutral
148	p.Ala148Trp	1.28	0.35	Indeterminate	1.28	0.35	Indeterminate
148	p.Ala148Phe	1.94	0.96	Indeterminate	1.94	0.96	Indeterminate
149	p.Glu149Asn	0.80	-0.31	Neutral	0.80	-0.31	Neutral
149	p.Glu149Lys	1.03	0.04	Neutral	1.03	0.04	Neutral
149	p.Glu149Thr	1.08	0.12	Neutral	1.08	0.12	Neutral

149	p.Glu149Arg	0.85	-0.24	Neutral			0.85	-0.24	Neutral	
149	p.Glu149Ser	1.14	0.19	Neutral			1.14	0.19	Neutral	
149	p.Glu149Ile	1.10	0.14	Neutral			1.10	0.14	Neutral	
149	p.Glu149Met	0.79	-0.34	Neutral			0.79	-0.34	Neutral	
149	p.Glu149His	0.93	-0.11	Neutral			0.93	-0.11	Neutral	
149	p.Glu149Gln	0.88	-0.19	Neutral			0.88	-0.19	Neutral	
149	p.Glu149Pro	0.91	-0.14	Neutral			0.91	-0.14	Neutral	
149	p.Glu149Leu	0.92	-0.13	Neutral			0.92	-0.13	Neutral	
149	p.Glu149Asp	0.86	-0.22	Neutral			0.86	-0.22	Neutral	
149	p.Glu149Glu	1.00	0.00	Neutral			1.00	0.00	Neutral	
149	p.Glu149Ala	1.00	0.00	Neutral			1.00	0.00	Neutral	
149	p.Glu149Gly	0.98	-0.02	Neutral			0.98	-0.02	Neutral	
149	p.Glu149Val	0.99	-0.01	Neutral			0.99	-0.01	Neutral	
149	p.Glu149Tyr	1.02	0.03	Neutral			1.02	0.03	Neutral	
149	p.Glu149Cys	0.86	-0.22	Neutral			0.86	-0.22	Neutral	
149	p.Glu149Trp	1.00	0.00	Neutral			1.00	0.00	Neutral	
149	p.Glu149Phe	1.06	0.09	Neutral			1.06	0.09	Neutral	
150	p.Gly150Asn	0.89	-0.17	Neutral			0.89	-0.17	Neutral	
150	p.Gly150Lys	1.03	0.04	Neutral			1.03	0.04	Neutral	
150	p.Gly150Thr	0.96	-0.06	Neutral			0.96	-0.06	Neutral	
150	p.Gly150Arg	1.03	0.04	Neutral			1.03	0.04	Neutral	
150	p.Gly150Ser	0.99	-0.01	Neutral			0.99	-0.01	Neutral	
150	p.Gly150Ile	0.92	-0.12	Neutral			0.92	-0.12	Neutral	
150	p.Gly150Met	1.07	0.10	Neutral			1.07	0.10	Neutral	
150	p.Gly150His	1.04	0.05	Neutral			1.04	0.05	Neutral	
150	p.Gly150Gln	0.93	-0.10	Neutral			0.93	-0.10	Neutral	
150	p.Gly150Pro	1.00	-0.01	Neutral			1.00	-0.01	Neutral	
150	p.Gly150Leu	0.91	-0.14	Neutral			0.91	-0.14	Neutral	
150	p.Gly150Asp	0.97	-0.05	Neutral			0.97	-0.05	Neutral	
150	p.Gly150Glu	0.88	-0.18	Neutral			0.88	-0.18	Neutral	
150	p.Gly150Ala	0.86	-0.21	Neutral			0.86	-0.21	Neutral	
150	p.Gly150Gly	1.00	0.00	Neutral			1.00	0.00	Neutral	
150	p.Gly150Val	0.97	-0.05	Neutral			0.97	-0.05	Neutral	
150	p.Gly150Tyr	0.91	-0.13	Neutral			0.91	-0.13	Neutral	
150	p.Gly150Cys	0.77	-0.38	Neutral			0.77	-0.38	Neutral	
150	p.Gly150Trp	0.92	-0.12	Neutral			0.92	-0.12	Neutral	
150	p.Gly150Phe	0.99	-0.01	Neutral			0.99	-0.01	Neutral	
151	p.Pro151Asn	1.03	0.04	Neutral			1.03	0.04	Neutral	
151	p.Pro151Lys	0.94	-0.09	Neutral			0.94	-0.09	Neutral	
151	p.Pro151Thr	1.03	0.05	Neutral			1.03	0.05	Neutral	
151	p.Pro151Arg	0.84	-0.26	Neutral			0.84	-0.26	Neutral	
151	p.Pro151Ser	1.03	0.04	Neutral			1.03	0.04	Neutral	
151	p.Pro151Ile	0.99	-0.01	Neutral			0.99	-0.01	Neutral	
151	p.Pro151Met	0.92	-0.12	Neutral			0.92	-0.12	Neutral	
151	p.Pro151His	1.06	0.09	Neutral			1.06	0.09	Neutral	
151	p.Pro151Gln	0.90	-0.15	Neutral			0.90	-0.15	Neutral	
151	p.Pro151Pro	1.00	0.00	Neutral			1.00	0.00	Neutral	
151	p.Pro151Leu	1.01	0.02	Neutral			1.01	0.02	Neutral	
151	p.Pro151Asp	1.02	0.03	Neutral			1.02	0.03	Neutral	
151	p.Pro151Glu	1.06	0.08	Neutral			1.06	0.08	Neutral	
151	p.Pro151Ala	1.09	0.12	Neutral			1.09	0.12	Neutral	
151	p.Pro151Gly	1.13	0.17	Neutral			1.13	0.17	Neutral	
151	p.Pro151Val	0.95	-0.08	Neutral			0.95	-0.08	Neutral	
151	p.Pro151Tyr	0.88	-0.18	Neutral			0.88	-0.18	Neutral	
151	p.Pro151Cys	0.89	-0.17	Neutral			0.89	-0.17	Neutral	
151	p.Pro151Trp	0.88	-0.18	Neutral			0.88	-0.18	Neutral	
151	p.Pro151Phe	0.92	-0.12	Neutral			0.92	-0.12	Neutral	
152	p.Ser152Asn	0.87	-0.20	Neutral			0.87	-0.20	Neutral	
152	p.Ser152Lys	0.96	-0.06	Neutral			0.96	-0.06	Neutral	
152	p.Ser152Thr	0.96	-0.06	Neutral			0.96	-0.06	Neutral	
152	p.Ser152Arg	0.89	-0.17	Neutral			0.89	-0.17	Neutral	
152	p.Ser152Ser	1.00	0.00	Neutral			1.00	0.00	Neutral	
152	p.Ser152Ile	0.76	-0.40	Neutral			0.76	-0.40	Neutral	
152	p.Ser152Met	0.97	-0.05	Neutral			0.97	-0.05	Neutral	
152	p.Ser152His	0.89	-0.17	Neutral			0.89	-0.17	Neutral	
152	p.Ser152Gln	0.79	-0.33	Neutral			0.79	-0.33	Neutral	
152	p.Ser152Pro	0.98	-0.03	Neutral			0.98	-0.03	Neutral	
152	p.Ser152Leu	0.96	-0.06	Neutral			0.96	-0.06	Neutral	
152	p.Ser152Asp	0.89	-0.17	Neutral			0.89	-0.17	Neutral	
152	p.Ser152Glu	0.91	-0.13	Neutral			0.91	-0.13	Neutral	
152	p.Ser152Ala	1.04	0.06	Neutral			1.04	0.06	Neutral	
152	p.Ser152Gly	0.97	-0.04	Neutral			0.97	-0.04	Neutral	
152	p.Ser152Val	0.98	-0.03	Neutral			0.98	-0.03	Neutral	
152	p.Ser152Tyr	1.10	0.14	Neutral			1.10	0.14	Neutral	
152	p.Ser152Cys	0.75	-0.42	Neutral			0.75	-0.42	Neutral	
152	p.Ser152Trp	0.89	-0.17	Neutral			0.89	-0.17	Neutral	
152	p.Ser152Phe	0.88	-0.19	Neutral			0.88	-0.19	Neutral	
153	p.Asp153Asn	1.33	0.41	Indeterminate	0.83	-0.28	Neutral	1.08	0.11	Neutral
153	p.Asp153Lys	0.99	-0.02	Neutral	1.33	0.41	Indeterminate	1.16	0.21	Neutral
153	p.Asp153Thr	1.47	0.56	Indeterminate	1.10	0.14	Neutral	1.29	0.36	Indeterminate
153	p.Asp153Arg	1.25	0.32	Indeterminate	1.37	0.46	Indeterminate	1.31	0.39	Indeterminate
153	p.Asp153Ser	0.82	-0.29	Neutral	0.72	-0.47	Neutral	0.77	-0.37	Neutral
153	p.Asp153Ile	0.91	-0.14	Neutral	1.16	0.22	Neutral	1.04	0.05	Neutral
153	p.Asp153Met	1.31	0.39	Indeterminate	0.92	-0.12	Neutral	1.11	0.16	Neutral
153	p.Asp153His	1.34	0.42	Indeterminate	0.92	-0.12	Neutral	1.13	0.18	Neutral
153	p.Asp153Gln	1.39	0.48	Indeterminate	0.95	-0.07	Neutral	1.17	0.23	Neutral
153	p.Asp153Pro	0.68	-0.56	Neutral	0.53	-0.93	Neutral	0.60	-0.73	Neutral
153	p.Asp153Leu	1.34	0.43	Indeterminate	0.94	-0.09	Neutral	1.14	0.19	Neutral
153	p.Asp153Asp	1.00	0.00	Neutral	1.00	0.00	Neutral	1.00	0.00	Neutral
153	p.Asp153Glu	1.18	0.24	Indeterminate	0.82	-0.29	Neutral	1.00	0.00	Neutral
153	p.Asp153Ala	0.67	-0.57	Neutral	0.98	-0.03	Neutral	0.83	-0.27	Neutral
153	p.Asp153Gly	0.72	-0.47	Neutral	0.64	-0.64	Neutral	0.68	-0.55	Neutral
153	p.Asp153Val	1.14	0.19	Neutral	1.20	0.26	Indeterminate	1.17	0.23	Neutral
153	p.Asp153Tyr	0.97	-0.04	Neutral	1.33	0.41	Indeterminate	1.15	0.20	Neutral
153	p.Asp153Cys	1.41	0.50	Indeterminate	1.09	0.13	Neutral	1.25	0.32	Indeterminate
153	p.Asp153Trp	1.25	0.32	Indeterminate	1.23	0.30	Indeterminate	1.24	0.31	Indeterminate
153	p.Asp153Phe	1.04	0.05	Neutral	1.07	0.09	Neutral	1.05	0.07	Neutral
154	p.Ile154Asn	1.10	0.13	Neutral			1.10	0.13	Neutral	
154	p.Ile154Lys	0.91	-0.13	Neutral			0.91	-0.13	Neutral	
154	p.Ile154Thr	1.09	0.13	Neutral			1.09	0.13	Neutral	
154	p.Ile154Arg	1.04	0.06	Neutral			1.04	0.06	Neutral	
154	p.Ile154Ser	0.86	-0.21	Neutral			0.86	-0.21	Neutral	
154	p.Ile154Ile	1.00	0.00	Neutral			1.00	0.00	Neutral	
154	p.Ile154Met	1.03	0.05	Neutral			1.03	0.05	Neutral	
154	p.Ile154His	1.13	0.17	Neutral			1.13	0.17	Neutral	
154	p.Ile154Gln	1.00	0.00	Neutral			1.00	0.00	Neutral	

154	p.Ile154Pro	1.13	0.18	Neutral	1.13	0.18	Neutral
154	p.Ile154Leu	0.93	-0.11	Neutral	0.93	-0.11	Neutral
154	p.Ile154Asp	0.99	-0.01	Neutral	0.99	-0.01	Neutral
154	p.Ile154Glu	1.06	0.09	Neutral	1.06	0.09	Neutral
154	p.Ile154Ala	1.27	0.34	Indeterminate	1.27	0.34	Indeterminate
154	p.Ile154Gly	0.87	-0.20	Neutral	0.87	-0.20	Neutral
154	p.Ile154Val	1.20	0.26	Indeterminate	1.20	0.26	Indeterminate
154	p.Ile154Tyr	1.15	0.20	Neutral	1.15	0.20	Neutral
154	p.Ile154Cys	1.13	0.18	Neutral	1.13	0.18	Neutral
154	p.Ile154Trp	1.23	0.30	Indeterminate	1.23	0.30	Indeterminate
154	p.Ile154Phe	1.06	0.08	Neutral	1.06	0.08	Neutral
155	p.Pro155Asn	0.98	-0.02	Neutral	0.98	-0.02	Neutral
155	p.Pro155Lys	1.19	0.25	Indeterminate	1.19	0.25	Indeterminate
155	p.Pro155Thr	0.18	-2.43	Neutral	0.18	-2.43	Neutral
155	p.Pro155Arg	0.90	-0.15	Neutral	0.90	-0.15	Neutral
155	p.Pro155Ser	2.13	1.09	Deleterious	2.13	1.09	Deleterious
155	p.Pro155Ile	1.37	0.45	Indeterminate	1.37	0.45	Indeterminate
155	p.Pro155Met	0.58	-0.78	Neutral	0.58	-0.78	Neutral
155	p.Pro155His	1.63	0.71	Indeterminate	1.63	0.71	Indeterminate
155	p.Pro155Gln	0.46	-1.11	Neutral	0.46	-1.11	Neutral
155	p.Pro155Pro	1.00	0.00	Neutral	1.00	0.00	Neutral
155	p.Pro155Leu	0.50	-1.00	Neutral	0.50	-1.00	Neutral
155	p.Pro155Asp	2.39	1.26	Deleterious	2.39	1.26	Deleterious
155	p.Pro155Glu	0.55	-0.87	Neutral	0.55	-0.87	Neutral
155	p.Pro155Ala	0.18	-2.45	Neutral	0.18	-2.45	Neutral
155	p.Pro155Gly	0.71	-0.49	Neutral	0.71	-0.49	Neutral
155	p.Pro155Val	1.99	0.99	Indeterminate	1.99	0.99	Indeterminate
155	p.Pro155Tyr	0.70	-0.51	Neutral	0.70	-0.51	Neutral
155	p.Pro155Cys	0.39	-1.35	Neutral	0.39	-1.35	Neutral
155	p.Pro155Trp	1.59	0.67	Indeterminate	1.59	0.67	Indeterminate
155	p.Pro155Phe	0.19	-2.36	Neutral	0.19	-2.36	Neutral
156	p.Asp156Asn	1.05	0.06	Neutral	1.05	0.06	Neutral
156	p.Asp156Lys	0.99	-0.01	Neutral	0.99	-0.01	Neutral
156	p.Asp156Thr	1.07	0.10	Neutral	1.07	0.10	Neutral
156	p.Asp156Arg	1.01	0.01	Neutral	1.01	0.01	Neutral
156	p.Asp156Ser	1.01	0.02	Neutral	1.01	0.02	Neutral
156	p.Asp156Ile	0.97	-0.04	Neutral	0.97	-0.04	Neutral
156	p.Asp156Met	0.99	-0.01	Neutral	0.99	-0.01	Neutral
156	p.Asp156His	0.98	-0.04	Neutral	0.98	-0.04	Neutral
156	p.Asp156Gln	1.19	0.25	Indeterminate	1.19	0.25	Indeterminate
156	p.Asp156Pro	0.99	-0.02	Neutral	0.99	-0.02	Neutral
156	p.Asp156Leu	1.09	0.12	Neutral	1.09	0.12	Neutral
156	p.Asp156Asp	1.00	0.00	Neutral	1.00	0.00	Neutral
156	p.Asp156Glu	1.05	0.07	Neutral	1.05	0.07	Neutral
156	p.Asp156Ala	1.27	0.34	Indeterminate	1.27	0.34	Indeterminate
156	p.Asp156Gly	1.10	0.14	Neutral	1.10	0.14	Neutral
156	p.Asp156Val	1.13	0.18	Neutral	1.13	0.18	Neutral
156	p.Asp156Tyr	1.13	0.17	Neutral	1.13	0.17	Neutral
156	p.Asp156Cys	1.10	0.14	Neutral	1.10	0.14	Neutral
156	p.Asp156Trp	0.90	-0.15	Neutral	0.90	-0.15	Neutral
156	p.Asp156Phe	1.00	0.00	Neutral	1.00	0.00	Neutral