DH511.2 UCA	E	V	Q	L	V	E	S	G	G	G	L	V	K	P	G	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	
	G N/A, A N/A, G 0.99	G 1.07, T 0.61, G 0.42	C 0.18, A 0.26, G 2.21	C 3.09, T 0.31, G 0.30	G 0.99, T 0.78, G 0.60	G 0.41, A 0.89, G 0.46	T 0.35, C 0.22, T 0.48	G 0.18, G 0.14, G 0.16	G 1.53, G 0.94, A 0.31	G 0.13, G 3.20, C 0.29	T 0.56, T 0.62, G 0.37	G 3.41, T 1.95, A 1.62	A 1.79, A 1.51, G 0.16	C 0.93, C 0.21, T 1.04	G 0.18, G 0.14, G 0.16	
DH511.2	Q	V	Q	L	V	Q	S	G	G	G	L	V	K	P	G	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	
	C N/A, A N/A, G 0.68	G 1.07, T 0.61, G 0.42	C 0.18, A 0.26, G 2.21	C 3.09, T 0.31, G 0.30	G 3.41, T 2.87, A 1.69	C 1.33, A 0.83, G 0.82	T 0.35, C 0.22, T 0.48	G 0.18, G 0.14, G 0.16	G 1.53, G 0.94, A 0.31	G 0.99, G 0.06, T 0.85	C 0.22, T 0.48, G 0.30	G 0.99, T 0.90, G 0.27	A 0.56, A 1.37, G 0.16	C 3.10, C 0.04, G 0.06	G 0.14, G 0.16, G 0.16	
	0.05228	0.66783	0.66779	0.67991	0.64928	0.01863	0.85772	0.91305	0.60835	0.49420	0.81953	0.34684	0.51858	0.74731	0.92439	

DH511.2 UCA	G	S	L	R	L	S	C	A	A	S	G	F	T	F	S	
	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	
	G 0.16, G 0.48, G 0.17	T 0.40, C 0.37, C 0.32	C 0.11, T 1.03, T 1.34	A 0.54, G 0.20, A 0.17	C 0.44, T 0.52, C 0.27	T 0.66, C 0.31, C 0.39	T 0.62, G 1.11, T 0.60	G 0.42, C 0.18, A 0.26	G 0.21, C 0.93, C 0.13	T 0.43, C 0.36, T 0.48	G 0.38, G 1.33, A 0.51	T 1.17, T 0.41, C 0.54	A 1.02, C 0.36, T 0.61	T 0.65, T 0.48, C 0.79	A 0.83, G 4.19, T 0.54	
DH511.2	G	S	L	T	L	S	C	S	A	S	G	F	F	F	D	
	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	
	G 0.16, G 0.48, G 0.17	T 0.40, C 0.37, C 0.32	C 0.47, T 0.41, C 0.16	A 0.48, C 0.47, A 0.48	C 0.37, T 0.52, C 0.27	T 0.66, C 0.31, C 0.39	T 0.62, G 0.87, T 0.85	T 0.32, C 0.79, A 1.05	G 0.21, C 0.93, C 0.13	T 0.43, C 0.36, T 0.48	G 0.38, G 1.33, A 0.51	T 1.17, T 0.41, C 1.55	T 0.74, T 0.76, T 0.75	T 0.80, T 0.37, C 0.55	G 1.28, A 0.70, T 0.89	
	0.85192	0.82966	0.77039	0.01477	0.80384	0.80076	0.64564	0.03641	0.73970	0.83327	0.70059	0.63147	0.00228	0.64881	0.01540	

DH511.2 UCA	N	A	W	M	S	W	V	R	Q	A	P	G	K	G	L	
	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	
	A 1.61, A 1.35, C 0.62	G 0.48, C 0.57, C 0.21	T 1.04, G 0.38, G 1.33	A 1.64, T 0.88, G 0.46	A 0.74, G 4.09, C 3.09	T 0.31, G 0.18, G 0.64	G 0.17, T 0.40, C 0.10	C 0.29, G 0.16, C 0.35	C 0.29, A 0.55, G 0.09	G 3.20, C 0.27, T 0.37	C 0.19, C 0.29, A 0.55	G 0.08, G 0.65, G 0.61	A 0.90, A 0.33, G 0.11	G 0.13, G 0.06, G 1.72	C 0.19, T 0.31, G 0.38	
DH511.2	N	S	W	M	G	W	V	R	Q	A	P	G	K	G	L	
	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	
	A 1.22, A 2.02, T 1.05	T 0.41, C 0.52, A 0.95	T 1.05, G 0.85, G 1.33	A 1.64, T 0.98, G 0.08	G 0.14, G 0.48, G 0.81	T 0.78, G 0.28, G 0.64	G 0.17, T 0.40, C 0.10	C 0.52, G 0.27, T 0.51	C 0.13, A 0.67, G 0.09	G 0.29, C 0.18, G 0.38	C 0.35, C 0.29, A 0.55	G 0.08, G 0.65, G 0.61	A 0.90, A 0.33, G 0.11	G 0.65, G 0.22, A 0.58	C 0.13, T 0.35, G 0.38	
	0.46465	0.01775	0.68606	0.49093	0.04547	0.83944	0.86376	0.89524	0.84385	0.46568	0.88575	0.84217	0.74262	0.93433	0.89260	

DH511.2 UCA	E	W	V	G	R	I	K	S	K	T	D	G	G	T	T	
	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	
	G 0.41, A 0.89, G 1.47	T 0.69, G 0.28, G 0.64	G 2.74, T 0.27, T 0.34	G 0.14, G 0.19, C 0.24	C 0.11, G 4.48, T 1.37	A 2.62, T 1.00, T 1.28	A 1.32, A 1.67, A 1.47	A 1.51, G 2.30, C 3.99	A 0.49, A 1.65, A 1.17	A 0.66, C 2.53, T 0.21	G 1.67, A 0.51, T 0.98	G 0.64, G 0.99, T 0.78	G 0.28, G 0.65, G 0.22	A 0.45, C 0.16, A 0.61	A 2.18, C 1.19, A 0.64	
DH511.2	E	W	V	G	R	I	R	R	L	K	D	G	A	T	G	
	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	
	G 0.41, A 0.89, G 1.47	T 0.69, G 0.28, G 0.64	G 2.74, T 0.27, T 0.34	G 0.14, G 0.19, C 0.24	C 0.06, G 3.07, C 0.64	A 1.09, T 1.05, T 2.10	A 0.54, G 0.49, A 0.53	A 0.33, G 0.11, G 3.20	C 0.27, T 0.29, C 0.41	A 0.73, A 1.83, A 1.17	G 0.20, A 0.66, C 0.16	G 0.32, G 1.03, T 0.61	G 0.29, C 0.15, G 0.16	A 0.94, C 0.15, A 0.37	G 0.64, G 0.11, A 0.62	
	0.60729	0.76564	0.50335	0.92021	0.46751	0.42534	0.12916	0.34493	0.00518	0.00258	0.56746	0.69619	0.02149	0.84368	0.01159	

DH511.2 UCA	D	Y	A	A	P	V	K	G	R	F	T	I	S	R	D	
	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	
	G 0.08, A 0.17, C 0.85	T 0.96, A 1.69, C 1.70	G 3.45, C 1.55, T 0.53	G 1.27, C 0.94, A 0.77	C 0.20, C 0.49, C 0.08	G 1.03, T 0.55, G 0.27	A 0.59, A 1.00, A 0.73	G 0.11, G 0.28, C 0.26	A 0.58, G 0.43, A 0.39	T 1.17, T 0.41, C 0.54	A 0.86, C 0.47, C 0.27	A 1.31, T 0.56, C 0.84	T 0.43, C 0.41, A 0.66	A 0.71, G 0.29, A 0.67	G 1.42, A 0.65, T 0.88	
DH511.2	E	Y	G	A	A	V	K	D	R	F	T	I	S	R	D	
	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	
	G 0.98, A 0.30, A 2.56	T 1.48, A 3.93, T 1.84	G 0.64, G 0.99, T 0.61	G 0.42, C 0.18, A 0.26	G 0.21, C 3.10, C 0.11	G 1.03, T 0.55, G 0.27	A 0.56, A 0.33, G 0.35	G 0.24, A 0.45, C 0.15	A 0.64, G 0.43, A 0.39	T 1.17, T 0.41, C 0.54	A 0.86, C 0.47, C 0.27	A 1.01, T 1.01, T 0.90	T 0.48, C 4.57, A 0.66	A 0.71, G 0.29, A 0.67	G 1.42, A 0.65, T 0.88	
	0.07227	0.52770	0.06381	0.57786	0.01633	0.68007	0.65272	0.05115	0.80774	0.63050	0.72133	0.58142	0.86753	0.83175	0.56953	

DH511.2 UCA	D	S	K	N	T	L	Y	L	Q	M	N	S	L	K	T	
	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	
	G 1.66, A 0.72, T 1.17	T 0.41, C 4.57, A 0.73	A 1.65, A 1.86, A 1.86	A 1.17, A 1.15, C 1.31	A 0.90, C 0.64, G 3.45	C 1.55, T 0.37, G 1.59	T 1.60, A 3.49, T 0.36	C 1.82, T 0.89, G 1.27	C 3.02, A 0.49, A 1.62	A 1.86, T 0.48, G 0.65	A 0.67, A 1.00, C 1.19	A 0.77, G 0.21, C 0.93	C 0.21, T 0.38, G 0.57	A 0.59, A 1.61, A 1.17	A 1.20, C 1.55, C 0.23	
DH511.2	D	S	R	N	M	L	Y	L	H	M	R	T	L	K	T	
	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	
	G 0.16, A 0.59, C 0.15	A 0.83, G 4.19, T 1.49	A 2.46, G 0.49, A 0.37	A 1.55, A 2.15, T 1.48	A 3.93, T 0.65, G 2.11	C 0.84, T 0.37, G 1.59	T 1.91, A 1.48, C 1.19	C 1.08, T 0.25, G 1.27	C 0.94, A 0.62, C 0.37	A 1.16, T 1.37, G 0.46	A 0.59, G 1.59, G 0.24	A 0.62, C 0.41, C 0.31	C 0.22, T 0.38, G 0.57	A 0.59, A 1.61, A 1.17	A 1.20, C 1.55, C 0.23	
	0.57404	0.67782	0.11597	0.48573	0.02599	0.76810	0.32939	0.68613	0.11508	0.48808	0.03876	0.01782	0.87865	0.52714	0.53672	

DH511.2 UCA	E	D	T	A	V	Y	Y	C	T	T	D	E	G	T	P	
	91	92	93	94	95	96	97	98	99	100	101	102	103	104	105	
	G 0.50, A 0.55, G 1.59	G 0.24, A 0.45, C 0.59	A 0.37, C 0.72, A 0.77	G 0.21, C 3.10, C 0.11	G 1.03, T 0.67, G 4.51	T 1.60, A 2.62, T 1.00	T 1.43, A 1.74, C 2.83	T 0.30, G 1.59, T 1.91	A 1.48, C 1.74, C 0.40	A 1.02, C 0.72, A 0.64	G 0.43, A 0.65, T 0.88	G 0.46, A 0.59, G 0.09	G 0.13, G 1.53, G 0.22	A 0.62, C 0.41, C 0.54	C 0.18, C 0.18, A 0.60	
DH511.2	E	D	S	G	T	Y	Y	C	T	M	D	E	G	T	P	
	91	92	93	94	95	96	97	98	99	100	101	102	103	104	105	
	G 0.50, A 0.55, G 1.59	G 0.24, A 0.58, C 0.44	T 0.45, C 0.35, A 0.67	G 0.09, G 0.28, C 2.04	A 1.58, C 0.36, T 1.07	T 1.43, A 2.86, T 1.00	T 1.77, A 2.86, T 1.01	T 0.63, G 3.77, T 1.91	A 1.48, C 1.74, C 0.27	A 1.01, T 1.05, G 0.85	G 1.33, A 1.64, T 0.88	G 0.46, A 0.59, G 0.09	G 0.13, G 1.53, G 0.22	A 0.62, C 0.41, C 0.54	C 0.18, C 0.18, A 0.60	
	0.69532	0.76102	0.03131	0.11924	0.01062	0.38114	0.45812	0.57559	0.49892	0.00330	0.67636	0.77942	0.69222	0.77423	0.91561	

DH511.2 UCA	V	L	R	F	L	E	W	G	Y	Y	Y	Y	Y	M	D	
	106	107	108	109	110	111	112	113	114	115	116	117	118	119	120	
	G 4.19, T 1.02, A 2.62	T 1.00, T 1.43, A 1.59	C 0.69, G 2.79, A 0.94	T 1.34, T 0.47, T 0.75	T 0.68, T 0.61, G 0.21	G 0.41, A 0.89, G 1.47	T 0.69, G 0.28, G 0.14	G 0.06, G 1.72, C 0.52	T 1.07, A 1.86, C 2.56	T 0.96, A 1.86, C 2.56	T 0.96, A 1.86, C 2.56	T 0.96, A 1.86, C 2.56	T 0.96, A 1.48, C 1.23	A 1.16, T 1.05, G 0.85	G 0.17, A 1.03, C 0.33	
DH511.2	V	T	R	F	L	E	W	G	Y	F	Y	Y	Y	M	A	
	106	107	108	109	110	111	112	113	114	115	116	117	118	119	120	
	G 4.19, T 0.54, A 1.61	A 1.00, C 1.31, A 0.90	C 0.64, G 3.45, C 0.35	T 1.32, T 0.40, C 1.55	T 1.63, T 1.34, A 0.54	G 0.49, A 0.30, A 2.14	T 1.47, G 0.08, G 0.14	G 0.06, G 1.72, C 0.52	T 1.07, A 1.86, C 1.95	T 0.98, T 0.40, C 2.29	T 1.05, A 2.70, T 1.00	T 1.77, A 2.86, T 1.00	T 1.77, A 3.39, T 1.42	A 3.93, T 1.84, G 0.15	G 0.19, C 0.24, C 0.11	
	0.39739	0.00306	0.57330	0.62428	0.83364	0.60429	0.81064	0.65351	0.49378	0.07907	0.49953	0.50027	0.52731	0.47618	0.05419	

DH511.2 UCA	V	W	G	K	G	T	T	V	T	V	S	S		
	121	122	123	124	125	126	127	128	129	130	131	132		
	G 0.49, T 0.46, C 0.22	T 0.48, G 0.18, G 0.14	G 0.06, G 9.28, C 0.13	A 0.49, A 1.83, A 0.73	G 0.11, G 0.65, G 0.22	A 0.62, C 0.68, C 0.40	A 0.84, C 0.15, G 0.32	G 0.22, T 0.44, C 0.16	A 0.86, C 0.42, C 0.17	G 0.27, T 0.46, C 0.24	T 0.66, C 0.31, C 0.62	T 0.41, C N/A, A N/A		
DH511.2	V	W	G	R	G	T	T	V	I	V	S	S		
	121	122	123	124	125	126	127	128	129	130	131	132		
	G 1.84, T 0.65, T 0.62	T 0.61, G 0.10, G 0.14	G 0.06, G 9.28, C 0.26	A 0.58, G 0.44, A 0.91	G 0.09, G 0.65, G 0.22	A 0.62, C 0.68, C 0.40	A 0.84, C 0.15, G 0.32	G 0.22, T 0.44, C 0.40	A 1.51, T 0.49, C 0.47	G 0.29, T 0.46, C 0.24	T 0.32, C 0.28, T 1.90	T 0.43, C N/A, A N/A		
	0.79719	0.84554	0.15075	0.12719	0.83559	0.73375	0.77507	0.85206	0.03626	0.83113	0.80100	0.82776		