

S10 Table. Nucleotide (below diagonal) and amino acid (above diagonal) sequences identities (%) of movement protein (MP).

Isolate	Genbank	CTLV-IPPN122	CTLV-TL100	CTLV-TL101	CTLV-TL102	CTLV-TL103	CTLV-TL104	CTLV-TL110	CTLV-TL111	CTLV-TL112	CTLV-TL113	CTLV-TL114	CTLV-TL115	CTLV-MTH	CTLV-XHC	CTLV-PK	CTLV-Ponkan8	CTLV-ML	CTLV-Kumquat1	CTLV-LCdNA-1	CTLV-Shatang Orange	CTLV-HJY	CTLV-ASGV-1-HJY	CTLV-ASGV-2-HJY	CTLV-VL	ASGV-Li-23	ASGV-P-209	ASGV-p12	ASGV-AC	ASGV-HH	ASGV-241KP	ASGV-Matsuco	ASGV-FKSS2	ASGV-N297	ASGV-Kiyomi	ASGV-Nagami	ASGV-kfp	ASGV-Ac	ASGV-CHN	ASGV-YTG	ASGV-YTG	ASGV-HT	PBNLSV
CTLV-IPPN122	MH108986	96.26	96.26	95.95	95.63	96.26	95.63	95.63	94.70	95.95	95.63	95.63	97.19	95.32	95.95	95.95	95.63	95.63	95.32	95.32	95.63	96.26	95.95	95.32	97.19	96.26	96.26	94.08	94.39	95.95	95.01	94.08	96.26	97.19	97.50	96.26	96.57	97.19	96.26	93.76	97.19	95.32	93.45
CTLV-TL100	MH108975	85.87	100.00	99.68	99.37	99.37	99.37	99.37	96.57	96.57	96.26	98.75	97.81	95.32	96.57	96.57	99.37	96.26	96.57	95.95	96.88	96.57	97.19	96.26	96.26	96.26	96.26	95.01	96.57	96.26	96.26	96.88	97.81	97.50	99.37	97.50	97.19	96.88	94.39	97.19	96.88	95.01	
CTLV-TL101	MH108976	86.29	98.85	99.68	99.37	99.37	99.37	99.37	96.57	96.57	96.26	98.75	97.81	95.32	96.57	96.57	99.37	96.26	96.57	95.95	96.88	96.57	97.19	96.26	96.26	96.26	96.26	95.01	96.57	96.26	96.26	96.88	97.81	97.50	99.37	97.50	97.19	96.88	94.39	97.19	96.88	95.01	
CTLV-TL102	MH108977	86.18	98.44	98.96	99.06	99.06	99.06	99.06	96.26	96.26	95.95	98.44	97.50	95.01	96.26	96.26	99.06	95.95	96.26	95.63	96.57	96.26	96.88	95.95	95.95	95.95	94.70	96.26	95.95	95.95	95.95	96.57	97.50	97.19	99.06	97.19	96.88	96.57	94.08	96.88	96.57	94.70	
CTLV-TL103	MH108978	86.08	98.54	98.85	98.44	98.75	100.00	100.00	95.95	95.95	95.63	98.75	97.19	94.70	95.95	95.95	100.00	95.63	95.95	95.32	96.26	95.95	96.57	95.63	95.63	95.95	94.39	95.95	95.63	95.95	96.26	97.19	96.88	98.75	96.88	97.19	96.26	93.76	96.57	96.26	94.39		
CTLV-TL104	MH108979	87.33	94.28	94.60	94.60	94.91	98.75	98.75	96.57	96.57	96.26	98.75	97.19	95.32	96.57	96.57	98.75	96.26	96.57	95.95	96.88	96.57	97.19	96.57	96.57	96.57	94.70	96.26	96.26	96.57	96.26	97.50	97.81	99.37	97.19	97.19	97.50	94.39	97.81	96.57	95.01		
CTLV-TL110	MH108980	86.08	98.54	98.85	98.44	100.00	94.91	100.00	95.95	95.95	95.63	98.75	97.19	94.70	95.95	95.95	100.00	95.63	95.95	95.32	96.26	95.95	96.57	95.63	95.63	95.95	94.39	95.95	95.63	95.95	96.26	97.19	96.88	98.75	96.88	97.19	96.26	93.76	96.57	96.26	94.39		
CTLV-TL111	MH108981	86.08	98.54	98.85	98.44	100.00	94.91	100.00	95.95	95.95	95.63	98.75	97.19	94.70	95.95	95.95	100.00	95.63	95.95	95.32	96.26	95.95	96.57	95.63	95.63	95.95	94.39	95.95	95.63	95.95	96.26	97.19	96.88	98.75	96.88	97.19	96.26	93.76	96.57	96.26	94.39		
CTLV-TL112	MH108982	85.56	87.44	88.05	87.64	88.16	86.91	88.16	88.16	88.16	97.50	95.32	95.95	96.88	97.50	97.50	95.95	97.50	99.37	97.50	97.81	96.26	95.01	95.01	95.01	95.01	94.39	96.26	95.63	95.01	97.19	96.57	96.26	95.95	96.26	95.01	95.63	93.14	96.88	93.45	92.21		
CTLV-TL113	MH108983	85.56	87.12	86.70	86.50	87.01	86.08	87.01	87.01	94.91	99.06	95.32	97.81	98.13	100.00	100.00	95.95	99.06	98.13	98.44	99.68	96.26	96.88	96.88	96.88	95.63	95.01	96.88	96.88	95.63	99.06	98.44	98.13	95.95	96.88	96.26	96.88	94.39	97.50	94.70	93.45		
CTLV-TL114	MH108984	85.77	86.70	86.50	86.70	86.60	86.18	86.60	86.60	94.91	95.01	95.01	97.50	97.81	99.06	99.06	95.63	100.00	97.81	98.13	99.37	96.26	96.57	96.57	95.63	95.32	94.70	96.57	96.57	95.32	98.75	98.13	97.81	95.63	96.57	95.95	96.57	94.08	97.19	94.39	93.14		
CTLV-TL115	MH108985	86.39	93.66	93.76	93.97	94.49	96.88	94.49	94.49	86.18	85.06	86.29	96.57	94.08	95.32	98.75	95.01	95.32	94.70	95.63	95.95	96.57	95.63	95.63	95.32	94.39	95.32	95.01	95.32	95.63	96.57	96.88	99.37	96.57	97.19	96.26	93.76	96.57	95.95	94.08			
CTLV-MTH	KCS588948	87.33	85.66	85.35	85.15	85.46	86.29	85.46	85.46	84.73	85.35	85.87	86.29	96.57	97.81	97.81	97.19	97.50	96.57	96.88	98.13	96.26	98.13	97.19	97.19	95.32	95.32	96.88	95.95	95.32	98.13	98.75	98.44	97.19	97.81	97.50	97.81	94.08	97.50	95.95	94.08		
CTLV-XHC	KCS588947	84.63	86.29	85.87	85.87	86.18	85.35	86.18	86.18	94.08	93.87	97.40	85.66	85.04	98.13	98.13	94.70	97.81	97.50	97.81	98.44	95.01	95.63	95.63	95.63	94.39	93.76	95.63	95.63	94.39	98.44	97.19	96.88	94.70	95.63	95.63	95.63	93.45	96.26	93.45	92.83		
CTLV-Pk	JX416228	85.56	87.12	86.70	86.50	87.01	86.08	87.01	87.01	94.91	100.00	95.01	85.56	85.35	93.87	100.00	95.95	99.06	98.13	98.44	99.68	96.26	96.88	96.88	96.88	95.63	95.01	96.88	96.88	95.63	99.06	98.44	98.13	95.95	96.88	96.26	96.88	94.39	97.50	94.70	93.45		
CTLV-Ponkan8	KY706358	85.56	87.12	86.70	86.50	87.01	86.08	87.01	87.01	94.91	100.00	95.01	85.56	85.35	93.87	100.00	95.95	99.06	98.13	98.44	99.68	96.26	96.88	96.88	96.88	95.63	95.01	96.88	96.88	95.63	99.06	98.44	98.13	95.95	96.88	96.26	96.88	94.39	97.50	94.70	93.45		
CTLV-ML	EUS53489	86.08	98.54	98.85	98.44	100.00	94.91	100.00	100.00	88.16	87.01	86.60	94.49	85.46	86.18	87.01	87.01	95.63	95.95	95.32	96.26	95.95	96.57	95.63	95.63	95.95	94.39	95.95	95.63	95.95	96.26	97.19	96.88	98.75	96.88	97.19	96.26	93.76	96.57	96.26	94.39		
CTLV-Kumquat1	AY646511	85.77	86.70	86.50	86.70	86.60	86.18	86.60	86.60	94.91	95.01	100.00	86.29	85.87	97.40	95.01	95.01	86.60	97.81	98.13	99.37	96.26	96.57	96.57	95.32	94.70	96.57	96.57	95.32	98.75	98.13	97.81	95.63	96.57	95.95	96.57	94.08	97.19	94.39	93.14			
CTLV-LCd-NA-1	FJ355920	85.87	88.47	88.05	87.64	88.16	86.91	88.16	88.16	99.58	95.32	95.11	86.18	85.04	94.49	95.32	95.32	88.16	97.81	98.44	96.26	95.63	95.63	95.63	95.63	95.01	96.88	96.26	95.63	97.81	97.19	96.88	95.95	96.88	95.63	96.26	93.76	97.50	94.08	92.21			
CTLV-Shatang Orange	JQ765412	85.35	86.50	86.29	86.29	86.60	85.98	86.60	86.60	95.01	94.70	98.44	86.08	85.46	97.71	94.70	94.70	86.60	98.44	95.43	98.75	95.32	96.57	95.95	95.95	94.70	94.08	95.95	95.95	94.70	98.13	97.50	97.19	95.32	96.57	95.32	95.95	93.45	96.57	93.76	92.83		
CTLV-HJY	MH144341	85.46	86.91	86.50	86.50	86.81	86.39	86.81	86.81	94.80	94.60	97.61	86.50	85.77	97.09	94.60	94.60	86.81	97.61	95.22	97.71	96.57	97.19	97.19	97.19	95.95	95.32	97.19	97.19	95.95	99.37	98.75	98.44	96.26	97.19	96.57	97.19	94.70	97.81	95.01	93.76		
CTLV-ASGV-1-HJY	MH144342	84.42	86.18	86.08	86.08	85.98	87.33	85.98	85.98	84.63	84.83	85.46	86.81	84.31	85.25	84.83	84.83	85.98	85.46	84.63	84.83	84.83	96.26	95.95	95.95	95.32	94.70	96.57	96.26	95.32	96.57	96.88	97.19	96.57	96.57	96.26	95.95	94.70	96.88	95.01	92.83		
CTLV-ASGV-2-HJY	MH144343	89.92	84.94	84.63	84.83	84.73	86.18	84.73	84.73	84.21	84.83	84.94	85.25	90.34	83.90	84.83	84.83	84.73	84.94	84.52	84.11	84.83	84.11	97.19	97.19	95.63	94.70	96.26	95.63	95.63	97.19	98.13	98.44	97.19	98.13	97.50	97.19	93.45	97.50	95.63	93.76		
CTLV-L	D16681	84.63	84.83	84.73	84.52	84.83	84.11	84.83	84.83	83.07	85.04	84.11	84.21	84.63	83.28	85.04	85.04	84.83	84.11	83.28	83.59	83.90	83.80	85.66	98.75	94.70	94.39	96.26	95.01	94.70	96.88	98.13	98.44	96.26	96.88	96.57	96.57	93.14	96.88	95.01	93.45		
ASGV-Li-23	AB004063	84.94	85.25	85.15	84.94	85.04	84.31	85.04	85.04	83.28	85.25	84.31	84.21	84.94	83.48	85.25	85.25	85.04	84.31	83.48	83.80	84.11	84.11	85.98	98.75	94.70	94.39	96.26	95.01	94.70	96.88	98.13	98.44</										