

Supplementary Table T1: Clinical and laboratory data on the day of admission of patients with dengue illness

Variable [#]	Dengue Infection N=32	Dengue with warning signs N=37	Severe dengue N= 50	P value	Statistical test
Age in years; Mean (SD)	9.6 (2.4)	9.3 (2.6)	8.6 (2.6)	0.26	Kruskal Wallis
Day of fever; Median (interquartile range)	2.6 (2, 3.7)	4.0 (2.9, 5.0)	5.0 (3.0, 6.0)	<0.0001	Kruskal Wallis
Platelet count at enrolment; (X 10 ³ / μL)*	94 (64, 171)	81 (40, 171)	44 (31, 77)	0.023	Kruskal Wallis
Viremia (genome equivalents/ml blood)*	11550 (522.5, 5355000)	14300 (1795, 3450000)	249000 (3325, 9745000)	0.5583	Kruskal Wallis

- Median with interquartile range

Supplementary Table T2: Dengue serotyping using RNA isolated from whole blood

Serotype	No. of patients
DENV-1	4
DENV-2	96
DENV-3	2
DENV-4	1
Two serotypes	3
Negative/Undetermined*	13
Total	119

*These cases were confirmed to be dengue by other assays conducted to detect dengue antigen/antibody/virus.

Supplementary Table T3: Number of reads obtained from the Illumina MiSeq sequencing run and reads mapping to different dengue serotypes.

Samples	Number of reads	Number of reads mapping to		
		Dengue 1	Dengue 2	Dengue 3
T5_S62	343742	6	19714	1
T14_S63	377764	11	114356	6
T17_S64	260502	0	926	0
T18_S65	442412	11	10752	0
T19_S66	337374	13	75832	5
T20_S67	258710	4	5146	0
T24_S68	248434	20077	0	45
T28_S69	343060	220338	4	500
T30_S70	392900	10	8356	5
T37_S71	568800	4	8680	1
T38_S72	505318	64	4	40663
T40_S73	508468	0	2450	0
T44_S74	481082	1	19178	1
T46_S75	436566	9	33578	8
T48_S76	418528	5	55534	8
T80_S77	119392	2	2	0
T81_S78	491062	13	8688	10
T82_S79	309176	16	61162	12
T84_S80	16912	1	252	2
T85_S81	68590	0	1698	0
T89_S82	203946	22	25908	17
T90_S83	254142	12	36622	18
T94_S84	415604	4	2	1448
T96_S85	39742	1	3418	1
T99_S86	55302	0	1510	3
T102_S87	64718	6	11420	4
T105_S88	197186	0	3964	4
T106_S89	11478	0	310	0
T107_S90	80026	25	22758	27
T108_S91	413048	0	488	0
T109_S92	134	0	0	0
T113_S93	100	0	4	0

Supplementary Table T4: GenBank accession IDs of dengue virus whole genomes sequenced in this study.

DENV2	MH822939
DENV2	MH822940
DENV2	MH822941
DENV2	MH822942
DENV2	MH822943
DENV2	MH822944
DENV2	MH822945
DENV2	MH822946
DENV2	MH822947
DENV2	MH822948
DENV2	MH822949
DENV2	MH822950
DENV2	MH822951
DENV2	MH822952
DENV2	MH822953
DENV2	MH822954
DENV2	MH822955
DENV2	MH822956
DENV3	MH822957
DENV1	MH822958
DENV1	MH822959

Supplementary Table T5: Accession numbers from GenBank

	Accession numbers
Whole genome D1 Phylogenetic tree construction	KJ806950, KX380806, AB204803, JN697056, KX620452, DQ285561, FJ639683, JQ048541, KP406801, KX620451, JQ922548, KX618706, KU509255, JN903581, LC128301, FJ024442, MF033261, FJ410204, KJ933413, JQ287664, DQ285560, JQ287667, KX380802, KX225484, JN697058, AB189121, MF033204, NC_001477
Whole genome D2 Phylogenetic tree construction	MF156233, KY427085, JF730049, KJ918750, MH069495, KF955402, JF730050, GQ252676, MH069499, FJ024477, JF730046, HQ332188, KF479233, KY849764, HQ999999, KU094070, HQ891023, FJ906968, MG779195, DQ448231, KY474309, FJ906966, KY794785, MF004385, JN819419, EU687227, MF459663, NC_001474, EU569700, KF041237, KU509273, MF314189, LC121816, KX380828, FJ898454
Whole genome D3 Phylogenetic tree construction	JF920396, JX669502, AY858039, KJ622192, FJ562107, KU509279, HQ332171, JN697379, KY849775, FJ639798, JF920397, KC762685, AB189128, JX669506, KF955461, NC_001475, HM756282, EF643017, KF955458, MH544649, KY670634, KJ622194, KX855927
Envelope protein D2 Phylogenetic tree construction	ABE02262, ABE02263, ABE02264, ABE02265, ABE02268, ACT68358, ACT68360, ACT68362, ACT68363, ACT68364, ACT68365, ACT68366, ACT68368, ACT68373, ACT68374, ACT68375, ACT68376, ACT68377, ACT68378, ACT68379, ACT68380, ACT68381, ADB90549, AFP56214, AFP56216, AFU65934, AFZ40225, AFZ40226, AFZ40227, AGK36297, AHG25306, AHG25307, AHG25309, AKA54984, AKA55026, AKA55044, AKA55051, AKA55063, AKA55074, AKA55077, AKQ00022, AKQ00025, ALF03719, ANC94852, ANC94857, ANC94860, ANC94861, ARM59246, ARO52692, ARO84697, AVH78236, AVH78240, AVY51408, AWK29889, BBC62175, DQ448231, DQ518645, EF105378, EF105379, EU003591, EU482720, EU596488, EU854293, FJ467493, FJ744723, FJ898454, FJ906959, GQ252677, GQ398268, GQ868592, HQ891024, HQ999999, JF260983, JF730049, JQ922549, JQ922550, JQ922551, JQ922552, JQ922553, JQ955623, JQ955624, JX286526, JX475906, JX966379, KC964095, KJ918750, KM204118, KM217158, KM587709, KP188569, KT175111, KT232055, KU509271, KU509277, KU517846, KX224266, KX262958, KX702404, KY427084, KY427085, KY882539, MF459663, MH069499
Sequences used for getting the consensus sequence to find the mutations	JX470186, JX475906, KM279515, KM279517, KM279518, KM279519, KM279520, KM279521, KM279522, KM279523, KM279524, KM279525, KM279526, KM279528, KM279530, KM279532, KM279533, KM279534, KM279535, KM279536, KM279537, KM279538, KM279539, KM279540, KM279541, KM279542, KM279543, KM279544, KM279545, KM279546, KM279548, KM279549, KM279550, KM279551, KM279552, KM279553, KM279554, KM279555, KM279556, KM279557, KM279558, KM279559, KM279560, KM279561, KM279562, KM279563, KM279564, KM279565, KM279566, KM279567, KM279568, KM279569, KM279570, KM279571, KM279572, KM279573, KM279575, M279576, KM279577, KM279578,

KM279579, KM279581, KM279582, KM279586, KM279587, KM279588, KM279590, KM279591, KM279592, KM279593, KM279594, KM279595, KM279597, KM279598, KM279599, KM279600, KM279601, KP012546, KP723478, KR779782, KX452015, KX452016, KX452017, KX452018, KX452019, KX452020, KX452021, KX452022, KX452024, KX452025, KX452026, KX452027, KX4, 52028, KX452029, KX452030, KX452031, KX452032, KX452033, KX452034, KX452035, KX452036, KX452037, KX452038, KX452039, KX452040, KX452041, KX452042, KX452043, KX452044, KX452045, KX452046, KY627762, KY627763, KY921904, KY921905, MG189962

Supplementary Table T6: Non-synonymous mutations across the genome compared to the consensus generated from the 115 dengue 2 cosmopolitan sequences. Amino acid position starts from each protein boundary. B and T cell epitopes are indicated based on Vaughan et.al.,

Protein	Nucleotide position	Amino acid position	Amino acid in consensus	Amino acid in samples	Epitope
C	187	63	A	T	CD4 T cell
	305	102	A	V	
	310	104	I	V/M	
	322	108	M	L	
	336	112	V	A	
prM	429	32	N	D	
	487	52	I	V	
	828	165	T	A	
	838	169	A	T	
E	996	52	H	Q	
	999	53	L	P	
	1021	61	V	I	
	1225	129	V	I	
	1258	140	V	M	
	1261	141	I	V	
	1324	162	I	V/I	B cell
	1348	170	I	V	B cell
	1804	322	I	V	B cell
	1876	346	H	Y	B cell
	2155	439	V	I	B cell
2215	459	I	V	B cell	
NS1	2389	22	T	A	
	2487	54	I	M	
	2504	60	V	A	
	2563	80	T	S	
	2575	84	V	I	
	2676	117	A	T	
	2702	126	T	I	
	2708	128	L	H	
	2718	131	H	Q	
	2809	162	V	I	
	2899	192	R	G	
	2905	194	V	I	
	2983	220	V	I	
	3140	272	R	K	B cell
	3193	290	D	N	

	3296	324	R	K	
NS2a	3478	31	I	L	
	3502	39	V	M	
	3568	61	T	A	
	3644	86	A	V	
	3737	117	S	T	
	3780	131	V	I	
	3785	133	K	R	
	3794	136	R	K	
	3797	137	N	S	
	3835	150	I	V	
	3893	169	T	I	
	3899	171	A	V	
	3913	176	S	T	
	3938	184	Q	R	
	3971	195	T	M	
4024	213	S	D		
NS2b	4224	63	E	D	
	4316	94	T	I	
	4391	119	A	V	
NS3	4466	13	G	E	
	4516	30	L	I	
	4643	73	K	R	CD8 T cell
	4854	143	K	N	CD8 T cell
	4939	172	I	V	
	4982	186	K	R	
	5242	273	I	V	
	5476	351	V	I	
	5806	461	V	I	
	6030	535	D	E	
	6124	567	V	I	T cell
6188	588	R	K		
NS4a	6289	4	L	M	
	6344	22	K	R	
NS4b	6784	19	T	A/V	
	7072	115	V	I	
	7179	150	M	I	
	7459	244	A	T	
	7463	245	N	S	
NS5	7528	19	A	S	
	7553	27	I	T	
	7562	30	K	R	
	7705	78	V	M	
	7766	98	K	R	
	7877	135	T	I	

7933	154	P	S	
8059	196	A	T	
8210	246	R	K	
8285	271	T	I	
8335	288	H	Y	
8339	289	E	G	
8375	301	K	R	
8585	371	K	R	
8608	379	E	K/N	
8620	383	K	E	
8636	388	K	R	
8761	430	G	R	
8857	462	L	I	
9003	510	E	D	
9287	605	V	G	
9320	616	E	G	
9364	631	S	G	
9375	634	Q	H	
9382	637	V	T/A	
9386	638	K	T	
9394	641	I	V	
9403	644	K	Q/R	
9406	645	N	D	
9415	648	I	A	
9499	676	S	G	
9566	698	R	K	
9835	788	I	V	
9872	800	T	K	
9901	810	L	M	
9959	829	P	L	
10100	876	N	S	