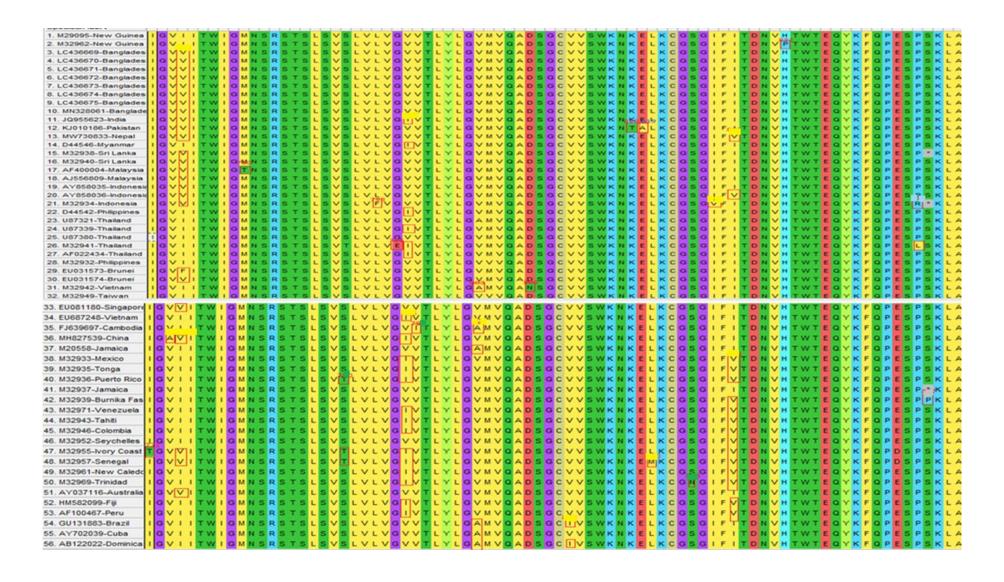
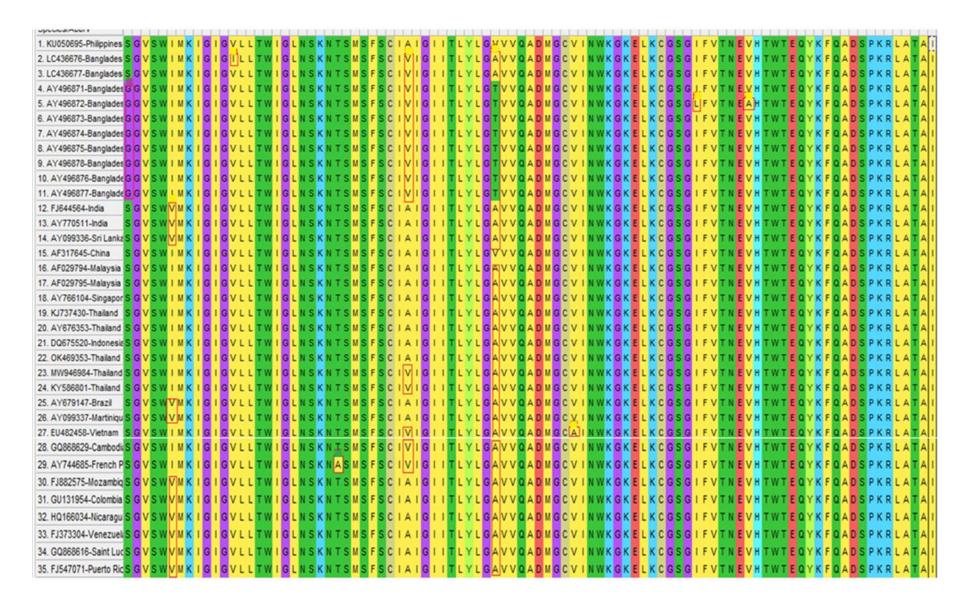
10	#M29095-New_Guinea_C_strain	ATA GGA GTC ATT ATC ACA TGG ATA GGA ATG AAT TCA CGC AGC ACC TCA CTG TCT GTG TCA	[60] 124	#M29095-New_Guinea_C_etrain 1	TOC OTT OTO AGC TOG AAA AAC AAA GAA CTG AAG TOT GGC AGT GGG ATT TTC ATC ACA GAC [180
11	#M32962-New_Guinea #Lc436669-Bangladesh	9.C	(60) 125 (60) 126	#LC436669-Bangladesh	1100 mg
1.3	#LC436670-Bangladesh	T G.C	[60] 127	#LC436670-Bangladesh #LC436671-Bangladesh	101]
1.4	#LC436671-Bangladesh #LC436672-Bangladesh	T 9.C	[60] 128 [60] 129	#LC436672-Bangladesh	100 T
16	#LC436673-Bangladesh	9.C	(60) 130	#LC436673-Bangladesh	
17	#LC436674-Bangladesh	g.c g.c	[60]	#LC436674-Bangladesh #LC436675-Bangladesh	
10	#LC436675-Bangladesh #MN328061-Bangladesh		(60)	#MW)20061-Bangladesh	1 10 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
20	#30955623-India	6.C 6.C	[60]	#JQ955623-Indam	TT
21	#EJO10186-Pakistan	T 9.C T	[60] 135	#E-010106-Pakistan #98-730033-Nepal	TT
22	#264730833-Nepal #244546-Myanmar	9.0 9.1	(60)	#D44546-Hyanmax	1983
2.4	#M32930-Sri_Lanka	T 0.C	[60] 138	#9432938-Eri_Lanka	A T 180
25	#M32940-SFI_Lanka #AF400004-Malaysia	т ө.с	[60] 140	#AF400004-Malaysia	[100 100
27	#AJ556809-Malaysia	9.C	1 603 141	#AJ556809-Malaysia	
20	#AY050035-Indonesia	9.C e.c	[60]	#AY050035-Indonesia	
29	#AY050036-Indonesia #M32934-Indonesia	9.c	[60] 144 [60] 144	#902934-Indonesta	1801 C
31	#D44542-Philippines		[60] 145	#D44542-Philippines #U07321-Thailand	
32	#U07321-Thailand #U07339-Thailand		[60] 147	#U07339-Thailand	1300
34	#U87380-Thailand		[60] 148	#U07300-Thailand #M02941-Thailand	A
3.5	#H32941-Thailand		[60] 150	#AFO22434-Thailand	
36	#AFO22434-Thailand #M32932-Philippines		151	#HG2932-Philippines	
3.0	#EUO31573-Brunel	T.C t.c	(60)	#EU031573-Brunel #EU031574-Brunel	100 T
39	#EU031574-Brunea #H02942-Vaetnam		[60] 154 [60] 155	#9402942=Vaetness	A
41	#H32949-Taiwan		[60]	#HO2949-Taluan #HU081180-Sangapore	(180 T T
4.2	#EU081180-Singapore #EU687248-Vietnam		[60] 157	#EU607240-Vietnem	
43	#FJ639697-Cambodia		159	#FJ639697-Cambodia	
45	#HHHH27539-China	CT G.C T	109	#HH027539-Chana	
46	#M20558-Jamaxca		[60] 160	#HC0558-Jamaica #HC2933-Mexico	
47	#H32933-Mexico #H32935-Tonga	A TC	[60] 162	#9432935-Tonga	T. T
49	#M32936-Puerto Rico		[60] 163	#M32936=Puerto_Rico	
50 51	#H32937-Jamaica #H32939-Burnika_Faso	<u>.</u> ç	[60] 164 [60] 165	#H02937-Jamaica #H02939-Burnika_Famo	
52	#M32971-Venezuela		[60] 166		
53	#H32943-Tahiti		[60] 167	#H32943-Tahiti	111 111 111 111 111 111 111 111 111 11
54	#3432946-colombia #3432952-Seychelles		[60] 168	#9432946=Colombia	
56	#M32955-Ivory Coast	.c	[60] 169		
57	#H32957-Senegal #H32961-New Caledonia		[60] 171		AA A A A A (10
59	#M32961-New_Caledonia		[60] 172	#3432961-New_Caledonia	
60	#AY037116-Australia	TC	[60] 173	#HG2969-Trinidad	11
61	#104502099-F131 #AF100467-Peru		[60] 174 [60] 175		
63	#GU131003-Brankl		[60] 176	#AF100467-Peru	T. T
64	#AY702039-Cuba #AB122022-Dominican Republic	C	[60] 177		A
67	#M29095-New_Guinea_C_strain #M02962-New_Guinea	CTA OTA TTO OTO OGA OTC OTO ACO CTO TAT TTO OGA OTT ATO OTO CAO OCC OAT ACT OOT	(120)	#AY702039-Cuba	T (10
69		T. A A T	(120)		
70	#LC436670-Bangladesh #LC436671-Bangladesh	T	[120] 181	#H0 9095-New_Guinea_C_strain #H0 2962-New_Guinea #L0 43669-Encyladesh #L0 436670-Encyladesh #L0 436671-Encyladesh	AMO UNDO CASE ASA SUM ASA UNA CAA SUM ASA SUM ASA SUM CAA UNA CAA UNA CAA CAA CAA CAA CAA CAA CAA CAA CAA C
72	#LC436672-Bangladesh	***	[150] 103	#Lc436669-Bangladesh	10 mm - 10 mm
73	#LC436673-Bangladesh #LC436674-Bangladesh		(120) 182 (120) 183 (120) 184 (120) 186 (120) 186	#L<436671-Bangladesh	1.T .A
75	#LC436675-Bangladesh #MW320061-Bangladesh	A T	107	#LC436672 = Bangladesh #LC436673 = Bangladesh	121 D. G.
77	#JQ955623-India	A		#LC436674-Bangladesh	
70	#EFO10106-Pakistan #HeF730033-Nepal		(120) 189 (120) 190 (120) 191 (120) 192 (120) 193	#LC436675-Bangladesh #HW320675-Bangladesh #JG955623-India #EJ010186-Pakistan	A
80	#D44546-Hyanmar	A.T A.T A	(120) 192	#EFO10106-Pakistan	1.T 1.A 1.1 1.T 1.T 1.T 1.T 1.T 1.T 1.T 1.T 1.T
01	#M32938-Bri_Lanka #M32940-Bri_Lanka	T A		#98730033-Nepal #544546-Hyanmar	20
0.3	#M92940-SEL Lanka #AF400004-Malaysia #AJ556809-Malaysia		(120) 195 (120) 196	#H02938-SEL_banka #H02940-SEL_banka	1:T : A : : : : : : : : : : : : : : : : :
0.5			[120] 197	#AF400004-Malay#Aa	
06	#AY950036-Indonesia #M02934-Indonesia	AAA T	(120) (120)	#AY050035-Indonesia	131
0.0	and4547-philippings		(120) 201	#14334-940-mannes #143393-940-ma.Lunha #1433940-ma.Lunha #AF400004-Palaya.a #AF5600-Palaya.a #AF55030-Falaya.a #AF55036-Indonesia #AF55036-Indonesia	
90	#U07321-Thasland #U07339-Thasland	A.T	(120) 203	#D44542-Fhillppines #U07321-Thailand	
91		T T T T T T T T T T T T T T T T T T T	(120) 204 (120) 205	#U07339-Thatland #U07380-Thatland	11. 11. 11. T.
93	#M32941-Thailand #AF022434-Thailand #M32932-Philippines	A A A A T	(120) 206 (120) 207	#H02241-Thatland #AF022434-Thatland #H02232-Fhilippines	
95	#EU031573-Brunes #EU031574-Brunes	111 110 111 111 110 111 11A T11 111 111 111 111 111 111 111	(120) 208	#H02902-Fhalappanes	
96	#343 2 9 4 2 - V 1 4 5 0 4 m		(120) 210	#EUO31573-Brunes #EUO31574-Brunes	111 111 111 111 111 111 111 111 111 11
98	#3432949-Taissan		(120) (120) (120) 212	#H02043-Vantram #H02949-Tallean	
100	#EU001100-Bingapore #EU607240-Vietness	T A	(120) (120) 213	#EUGS1180-Singapore #EUGS7248-Victor	A
101	#FJ639697-Combodia	A.AACC	(120	#FJ639697=Cambodia	1 1.
102	#9420550-Jamaica	AAA.T	[120 216	#90027539-Chana	
103	#M20550-Jamaica #M32933-Mexico	A A	[120 [120 218	#M20558-Janalca #M32933-Hexico	
105	#M32935-Tonga	0A AAC	[120 219	#H02935-Tonga	T
106	#9032936-Puerto_Rico	C.A A	[120 220 [120 221	#MG2936-Puerto_Rico	T A 0 (2)
100	#M32939-Burnika Faso		[120 222	#M32939-Burnika_Faso	**************************************
109	#M32971-Venezuela	GA AAC	[120 223	#H02971-Venesuela	13
110	#902946-Colombia		(120 224 (120 225	#902945-Tahiti #902946-Colombia	
2.2.2		GA A T	[120 226	#M32952-meyohelles	T
111	#M32952-Seychelles		(120 227	#MO2955-Ivory_Coast #MO2957-Benegal	TT
112	#M32955-Ivory Coast	GGAA AAAC C			
112 113 114	#3632955-Ivory_Coast #3632957-Senegal	004A AAAC C	(120 229	#MG2961-New_Caledonia	TCG
112	#M32955-Ivory Coast	00A A AAA	(120 229	#H02961-New_Caledonia #H02969-Trinidad	T
112 113 114 115 116 117	#M32955-Ivory_Coast #M32957-Senegal #M32961-New_Caledonia #M32969-Trinidad #AY037116-Australia		(120 (120 (120 (120	#AY037116-Australia	(2)
112 113 114 115 116 117 118	#M32955-Ivery_coast #M32957-Henegal #M32961-New_caledonia #M32969-Trinidad #AY037116-Australia #M552099-Faji	.0 .0 .A .A .A .A .A .CA .O .CA .O .C	(120 229 (120 230 (120 231 (120 232	#AY037116-Australia #H0582099-Fiji #AF100467-Peru	
112 113 114 115 116 117	#M32955-Ivory_Coast #M32957-Senegal #M32961-New_Caledonia #M32969-Trinidad #AY037116-Australia	-0 -0 -1 A - A - A - A - A - A - C C - A - A - C C - A - A	(120 230 (120 231 (120 232 (120 233 (120 233	#AY037116-Australia #H9582099-Faja #AF100467-Feeu #00131083-Brankl	T A G G G G G G G G G G G G G G G G G G
112 113 114 115 116 117 118 119 120 121	MM12955-Ivory, Commt MM12957-Benegal MM129561-New_Caledonia MM12961-New_Caledonia MM1037116-Australia MM103610-Para MM100467-Peru M01131063-Brasil MAY702039-Cuba	-0 -0 -A -A -A -A -A -C -C -A -0 -C -A -0 -C -A -0 -C -A -A -A -C -A -A -A -C -A -A -A -C -A -A -A -A -C -A	(120 230 (120 230 (120 232 (120 233 (120 234 (120 235 (120 235	#AY037116-Australia #H04582099-Fiji #AF100467-Peru #OU131883-Brasil #AY702039-Cuba	
112 113 114 115 116 117 118 119 120	MM12955-Ivory, Commt MM12957-Benegal MM129561-New_Caledonia MM12961-New_Caledonia MM1037116-Australia MM103610-Para MM100467-Peru M01131063-Brasil MAY702039-Cuba	.0 .0 .A .A .A .A .A .CA .0 .CA .0 .C	(120 230 (120 230 (120 232 (120 233 (120 234 (120 235 (120 235	#AY037116-Australia #H04582099-Fiji #AF100467-Peru #OU131883-Brasil #AY702039-Cuba	T A G G G G G G G G G G G G G G G G G G



Supplementary Fig. 1. (A). 240bp DEN-2 E/NS1 nucleotide sequences of different geographical regions of the world obtained from GenBank and aligned in MEGA11. (B). Common and random amino acid substitutions are shown in red marked blocks here in all the 56 DEN-2 E/NS1 junction amino acid sequences.

10	#KU050695-Philippines(prototype)	AGT	GGA																ATA									[78
11	#LC436676-Bangladesh												2	A	T		T											[78
12	#LC436677-Bangladesh														Т		Т											[78
13	#AY496871-Bangladesh																											ſ 78
14																												f 78
	#AY496872-Bangladesh	G.,	• • • •																									
15	#AY496873-Bangladesh	G.,	• • •		٠.٨		• • •																					[78
16	#AY496874-Bangladesh	G.,			A																						с	[78
17	#AY496875-Bangladesh	G.,			A																						с	[78
18	#AY496878-Bangladesh	G			8																						с	[78
19	#AY496876-Bangladesh	~																										r 78
		٠	• • • •																									
20	#AY496877-Bangladesh	G.,	• • •		٠.٨														• • •									[78
21	#FJ644564-India				T		G.G																					[78
22	#AY770511-India				T		G.G							T		G	т									A	с	[78
23	#AY099336-Sri Lanka				T		G.G									G	Т									A	с	[78
24	#AF317645-China																											[78
25	#AF029794-Malaysia																											[78
							• • • •	• • • •	• • • •	• • • •																		
26	#AF029795-Malaysia	• • •	• • • •	• • •	· · · A														• • •									[78
27	#AY766104-Singapore				À																							[78
28	#KJ737430-Thailand				A																						с	[78
29	#AY676353-Thailand				A																						с	[78
30	#DO675520-Indonesia				2																c						c	ſ 78
31	#OK469353-Thailand	• • • •				• • • •		• • • •																				[78
		• • • •	• • • •			• • •	• • • •	• • • •	• • • •																			
32	#MW946984-Thailand	c			A	• • •	• • •	• • •	• • •										• • •									[78
33	#KY586801-Thailand	c			٠.٨		• • •												• • •									[78
34	#AY679147-Brazil				т		G			c			A .	т		G	т									A	с	[78
35	#AY099337-Martinique				Т		G.,			с			A.	Т		G	Т									A	с	[78
36	#EU482458-Vietnam				A																						с	[78
00	WEG10E100 VICCIOES	•••	•••				•••									• • • •		• • • •	• • • •		• • • •	• • • •			•••			, 10
37	#GQ868629-Cambodia	c			A																						сΓ	78]
38	#AY744685-French Polynesia																											781
39	#FJ882575-Mozambique		• • • •																									781
40																												781
	#GU131954-Colombia				T	• • • •																						,
41	#HQ166034-Nicaragua		• • •		T	• • •																						78]
42	#FJ373304-Venezuela																											78]
43	#GQ868616-Saint Lucia						G			c			.A	т.		.G .	т.									.λ	c [78]
44	#PJ547071-Puerto Rico						G						.A	т.		.G .	т.									.λ	c [781
46	#KUDSO695-Philippines(prototype)	ATIC	TOA	data.	TOTAL	TGC	ATT	ara i	ATA C	CA A	TY AT	PE AC	A CT	TA	T CT	a aa	A GT	c co	G GTG	CAL	. ac	r GAO	* 100	a aaa	707	CTC	£15	61
																											f ro	
								TT.																			F15	
47	#LC436676-Bangladesh																										[15	
47 48	#LC436676-Bangladesh #LC436677-Bangladesh							т				с					c										[15	6]
47 48 49	#Lc436676-Bangladesh #Lc436677-Bangladesh #AY496871-Bangladesh							.T.		:	т	c					c	 T									[15	6] 6]
47 48 49 50	#LC436676-Bangladesh #LC436677-Bangladesh #AY496871-Bangladesh #AY496872-Bangladesh		:::					.T		 	T	.c				 A	c	 T									[15 [15	66] 66]
47 48 49 50 51	#LC436676-Bangladesh #LC436677-Bangladesh #A4496871-Bangladesh #A4496872-Bangladesh #A4496873-Bangladesh							.T.		: :	 T T	.c				A	c . AC . AC	T	3					 			[15 [15 [15	66] 66] 66]
47 48 49 50	#LC436676-Bangladesh #LC436677-Bangladesh #AY496871-Bangladesh #AY496872-Bangladesh							.T		: :	 T T	.c				A	c . AC . AC	T						 			[15 [15	66] 66] 66]
47 48 49 50 51	#LC436676-Bangladesh #LC436677-Bangladesh #A4496871-Bangladesh #A4496872-Bangladesh #A4496873-Bangladesh							.T			T	.c				A A A	c . AC . AC . AC	T T T	3								[15 [15 [15	66] 66] 66] 66]
47 48 49 50 51 52	#LC436676-Bangladesh #LC436677-Bangladesh #A1496871-Bangladesh #A1496872-Bangladesh #A1496873-Bangladesh #A1496874-Bangladesh #A1496875-Bangladesh							.T			T	.c				A A A A	C . AC . AC . AC	T T T	3								[15 [15 [15 [15	66] 66] 66] 66]
47 48 49 50 51 52 53 54	BLC436677-Bangladesh BAT496871-Bangladesh BAT496871-Bangladesh BAT496872-Bangladesh BAT496872-Bangladesh BAT496873-Bangladesh BAT496873-Bangladesh BAT496875-Bangladesh							.TTTTTTTTTT.			.T .T .T .T	.c				A A A A A	C . AC . AC . AC . AC	T T T T	3								[15 [15 [15 [15 [15 [15	66] 66] 66] 66] 66]
47 48 49 50 51 52 53 54 55	RLC436676-Bangladesh RLC436677-Bangladesh RX496871-Bangladesh RX496872-Bangladesh RX496873-Bangladesh RX496874-Bangladesh RX496875-Bangladesh RX496875-Bangladesh RX496875-Bangladesh RX496875-Bangladesh							.TTTTTTTTTT.				.c				A A A A A	C . AC . AC . AC . AC . AC	T T T T									[15 [15 [15 [15 [15 [15 [15]	66] 66] 66] 66] 66] 66]
47 48 49 50 51 52 53 54 55 56	BLC436677-Bangladesh BAT496877-Bangladesh BAT496872-Bangladesh BAT496872-Bangladesh BAT496872-Bangladesh BAT496873-Bangladesh BAT496873-Bangladesh BAT496873-Bangladesh BAT496876-Bangladesh BAT496876-Bangladesh							.TTTTTTTTTT.				.c				A A A A A	C . AC . AC . AC . AC . AC	T T T T									[15 [15 [15 [15 [15 [15 [15 [15]	66] 66] 66] 66] 66] 66]
47 48 49 50 51 52 53 54 55 56 57	BLC436678-Bangladesh BAT496871-Bangladesh BAT496871-Bangladesh BAT496872-Bangladesh BAT496873-Bangladesh BAT496873-Bangladesh BAT496874-Bangladesh BAT496875-Bangladesh BAT496875-Bangladesh BAT496875-Bangladesh BAT496875-Bangladesh BAT496875-Bangladesh BAT496875-Bangladesh BT5644564-India							.TTTTTTTTTT.			.T	.c				A A A A A	c . AC . AC . AC . AC . AC . AC	T									[15 [15 [15 [15 [15 [15 [15 [15]	66] 66] 66] 66] 66] 66]
47 48 49 50 51 52 53 54 55 56 57 58	BLC436678-Bangladesh BAT496871-Bangladesh BAT496871-Bangladesh BAT496872-Bangladesh BAT496872-Bangladesh BAT496873-Bangladesh BAT496874-Bangladesh BAT496878-Bangladesh BAT496876-Bangladesh BAT496877-Bangladesh BAT496877-Bangladesh BAT496877-Bangladesh BAT496871-Bangladesh BAT496871-Bangladesh BAT496871-Bangladesh BAT496871-Bangladesh BAT496871-Bangladesh							.TTTTTTTTTT.			.TTTTTTTTTTTTTTTTTT	.c				A A A A A	C . AC . AC . AC . AC . AC . AC . AC	T T T T T									[15 [15 [15 [15 [15 [15 [15 [15 [15]	66] 66] 66] 66] 66] 66] 66]
47 48 49 50 51 52 53 54 55 56 57 58 59	BLC436678-Bangladesh BAT496871-Bangladesh BAT496872-Bangladesh BAT496872-Bangladesh BAT496872-Bangladesh BAT496873-Bangladesh BAT496873-Bangladesh BAT496875-Bangladesh BAT496875-Bangladesh BAT496876-Bangladesh BAT496876-Bangladesh BAT496876-Bangladesh BAT496877-Bangladesh BAT496876-Bangladesh BAT496876-Bangladesh BAT496876-Bangladesh BAT496873-Bangladesh							.TTTTTTTTTT.			.TTTTTTTTTTTTTTTTTT	.c				A A A A A	C . AC . AC . AC . AC . AC . AC	T T T T T									[15 [15 [15 [15 [15 [15 [15 [15 [15]	66] 66] 66] 66] 66] 66] 66] 66]
47 48 49 50 51 52 53 54 55 56 57 58 59 60	BLC436677-Bangladesh BAT496871-Bangladesh BAT496872-Bangladesh BAT496873-Bangladesh BAT496873-Bangladesh BAT496873-Bangladesh BAT496873-Bangladesh BAT496875-Bangladesh BAT496875-Bangladesh BAT496876-Bangladesh BAT496877-Bangladesh BAT496877-Bangladesh BAT496877-Bangladesh BAT970511-India BAT70511-India BAT970511-India BAT970514-Schima							.TTTTTTTTTT.				.c				A A A A A	C . AC . AC . AC . AC . AC . AC . AC										[15] [15] [15] [15] [15] [15] [15] [15]	66] 66] 66] 66] 66] 66] 66] 66]
47 48 49 50 51 52 53 54 55 56 57 58 59 60 61	BLC436677-Bangladesh 8A1496877-Bangladesh 8A1496872-Bangladesh 8A1496872-Bangladesh 8A1496872-Bangladesh 8A1496873-Bangladesh 8A1496873-Bangladesh 8A1496873-Bangladesh 8A1496873-Bangladesh 8A1496873-Bangladesh 8A1496873-Bangladesh 8A1496873-Bangladesh 8A1496871-Bangladesh							.TTTTTTTTTT.				.c				A A A A A											[15 [15 [15 [15 [15 [15 [15 [15 [15]	66] 66] 66] 66] 66] 66] 66] 66]
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118	#KU050695-Philippines(prototype)	TAC	AAA	TTT	CAA	GCA	GAC	TCC	CCC	AAA	AGA	CTG	GCA	ACA	GCC	ATT	G	[280]
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130	#AY770511-India								A									[280]
131	#AY099336-Sri_Lanka								A									[280]
132	#AF317645-China																	[280]
133	#AF029794-Malaysia																٠	[280]
134	#AF029795-Malaysia																٠	[280]
135	#AY766104-Singapore																•	[280]
136	#KJ737430-Thailand																٠	[280]
137	#AY676353-Thailand																•	[280]
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140	#MW946984-Thailand																•	[280] [280]
141	#KY586801-Thailand								T									[280]
142	#AY679147-Brazil	• • •															•	[280]
143	#AY099337-Martinique																	[280]
144	#EU482458-Vietnam																	[280]
145	#GO868629-Cambodia																	[280]
146	#AY744685-French Polynesia																	
147	#FJ882575-Mozambique																	
148	#GU131954-Colombia	• • •							A	١		т.,		÷				
149	#HQ166034-Nicaragua									١		т.,		÷				[280]
150	#FJ373304-Venezuela					,				١		т.,		÷				[280]
151	#GQ868616-Saint Lucia								2	١		т.	(÷				[280]
152	#FJ547071-Puerto Rico								A	١		т.	0	3				. r2801
200	#*************************************																	[200]



Supplementary Fig. 2. (A). DEN-3 E/NS1 nucleotide sequences of different geographical regions of the world obtained from GenBank and aligned in MEGA11 are shown here. **(B)** Common and random amino acid substitutions are shown in red marked blocks here in all the 56 DEN-3 E/NS1 junction amino acid sequences.