

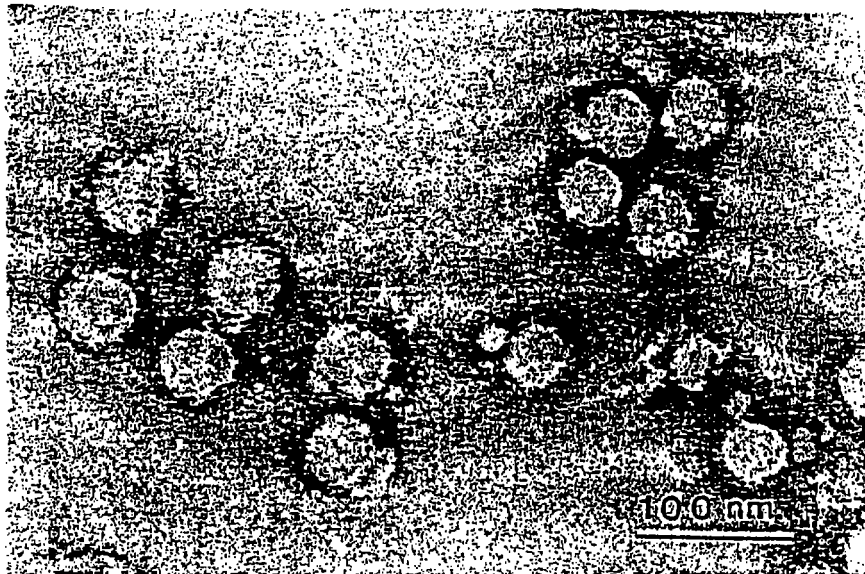
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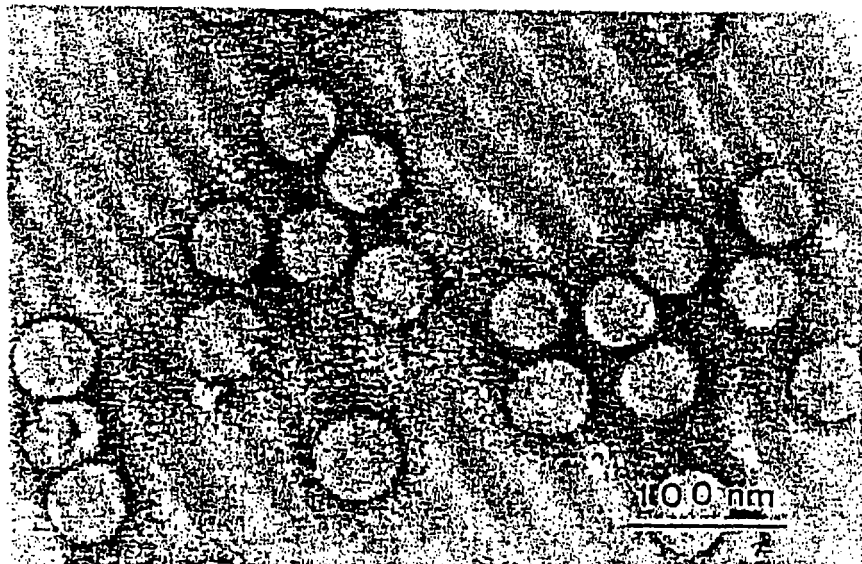
G00001

Fig. 1

A



B



SEQUENCE LISTING

<110> The Research Foundation for Microbial diseases of Osaka University

<120> Japanese Encephalitis

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<170> PatentIn Ver. 2.0

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Ile Met Ala Asn Asp Lys Pro Thr Leu Asp Val Arg Met Ile Asn Ile	
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gtc act gac att tca acg gtg gct cga tgc ccc acg act gga gaa gcc	240
Val Thr Asp Ile Ser Thr Val Ala Arg Cys Pro Thr Thr Gly Glu Ala	
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cac aac gag aaa cgt gct gac agc agc tac gtg tgc aaa caa ggc ttt	288
His Asn Glu Lys Arg Ala Asp Ser Ser Tyr Val Cys Lys Gln Gly Phe	
85 90 95	

act gac cgc gga tgg gga aat gga tgt gga ctt ttc ggg aaa gga agc	336
Thr Asp Arg Gly Trp Gly Asn Gly Cys Gly Leu Phe Gly Lys Gly Ser	
100 105 110	
att gac aca tgc gca aaa ttt tct tgt acc agt aag gcc att gga aga	384
Ile Asp Thr Cys Ala Lys Phe Ser Cys Thr Ser Lys Ala Ile Gly Arg	
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Met Ile Gln Pro Glu Asn Ile Lys Tyr Glu Val Gly Ile Phe Val His	
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Ser Gln Glu Gly Gly Leu His Gln Ala Leu Ala Gly Ala Ile Val Val	
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Leu Ala Ala Leu Gly Asp Thr Ala Trp Asp Phe Gly Ser Ile Gly Gly	
420 425 430	
gta ttc aac tcc ata ggg aaa gct gtt cac caa gta ttt ggc ggt gca	1344
Val Phe Asn Ser Ile Gly Lys Ala Val His Gln Val Phe Gly Gly Ala	
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Gly Ala Leu Leu Leu Trp Met Gly Val Asn Ala Arg Asp Arg Ser Ile	
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35 40 45

Glu Ala Ser Gln Leu Ala Glu Val Arg Ser Tyr Cys Tyr His Ala Ser
50 55 60

Val Thr Asp Ile Ser Thr Val Ala Arg Cys Pro Thr Thr Gly Glu Ala
65 70 75 80

His Asn Glu Lys Arg Ala Asp Ser Ser Tyr Val Cys Lys Gln Gly Phe
85 90 95

Thr Asp Arg Gly Trp Gly Asn Gly Cys Gly Leu Phe Gly Lys Gly Ser
100 105 110

Ile Asp Thr Cys Ala Lys Phe Ser Cys Thr Ser Lys Ala Ile Gly Arg
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Ala Ser Gln Ala Ala Lys Phe Thr Val Thr Pro Asn Ala Pro Ser Ile
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Arg	Ser	Gly	Leu	Asn	Thr	Glu	Ala	Phe	Tyr	Val	Met	Thr	Val	Gly	Ser	195	200	205
Lys	Ser	Phe	Leu	Val	His	Arg	Glu	Trp	Phe	His	Asp	Leu	Ser	Leu	Pro	210	215	220
Trp	Thr	Ser	Pro	Ser	Ser	Thr	Ala	Trp	Arg	Asn	Arg	Glu	Leu	Leu	Met	225	230	235 240
Glu	Phe	Glu	Glu	Ala	His	Ala	Thr	Lys	Gln	Ser	Val	Val	Ala	Leu	Gly	245	250	255
Ser	Gln	Glu	Gly	Gly	Leu	His	Gln	Ala	Leu	Ala	Gly	Ala	Ile	Val	Val	260	265	270
Glu	Tyr	Ser	Ser	Ser	Val	Lys	Leu	Thr	Ser	Gly	His	Leu	Lys	Cys	Arg	275	280	285
Leu	Lys	Met	Asp	Lys	Leu	Ala	Leu	Lys	Gly	Thr	Thr	Tyr	Gly	Met	Cys	290	295	300
Thr	Glu	Lys	Phe	Ser	Phe	Ala	Lys	Asn	Pro	Ala	Asp	Thr	Gly	His	Gly	305	310	315 320
Thr	Val	Val	Ile	Glu	Leu	Thr	Tyr	Ser	Gly	Ser	Asp	Gly	Ser	Cys	Lys	325	330	335
Ile	Pro	Ile	Val	Ser	Val	Ala	Ser	Leu	Asn	Asp	Met	Thr	Pro	Val	Gly	340	345	350
Arg	Leu	Val	Thr	Val	Asn	Pro	Phe	Val	Ala	Thr	Ser	Ser	Ser	Asn	Ser	355	360	365
Lys	Val	Leu	Val	Glu	Met	Glu	Pro	Pro	Phe	Gly	Asp	Ser	Tyr	Ile	Val	370	375	380
Val	Gly	Arg	Gly	Asp	Lys	Gln	Ile	Asn	His	His	Trp	His	Lys	Ala	Gly	385	390	395 400
Ser	Thr	Leu	Gly	Lys	Ala	Phe	Ser	Thr	Thr	Leu	Lys	Gly	Ala	Gln	Arg	405	410	415
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Ile Met Ala Asn Asp Lys Pro Thr Leu Asp Val Arg Met Ile Asn Ile
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Val Thr Asp Ile Ser Thr Val Ala Arg Cys Pro Thr Thr Gly Glu Ala
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His Asn Glu Lys Arg Ala Asp Ser Ser Tyr Val Cys Lys Gln Gly Phe
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Ala Ser Gln Ala Ala Lys Phe Thr Val Thr Pro Asn Ala Pro Ser Ile	
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Thr Leu Lys Leu Gly Asp Tyr Gly Glu Val Thr Leu Asp Cys Glu Pro	
180 185 190	
agg agt gga cta aac act gaa gcg ttt tac gtc atg acc gtg ggg tca	624
Arg Ser Gly Leu Asn Thr Glu Ala Phe Tyr Val Met Thr Val Gly Ser	
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Ser Gln Glu Gly Gly Leu His Gln Ala Leu Ala Gly Ala Ile Val Val	
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Replacement Sheet
28 March 2003

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Thr Glu Lys Phe Ser Phe Ala Lys Asn Pro Ala Asp Thr Gly His Gly	
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Arg Leu Val Thr Val Asn Pro Phe Val Ala Thr Ser Ser Ala Asn Ser	
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Lys Val Leu Val Glu Met Glu Pro Pro Phe Gly Asp Ser Tyr Ile Val	
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gtt gga agg gga gac aag cag att aac cac cat tgg tac aag gct gga	1200
Val Gly Arg Gly Asp Lys Gln Ile Asn His His Trp Tyr Lys Ala Gly	
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Ser Thr Leu Gly Lys Ala Phe Ser Thr Thr Leu Lys Gly Ala Gln Arg	
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ctg gca gcg ttg ggc gac aca gcc tgg gac ttt ggc tct att gga ggg	1296
Leu Ala Ala Leu Gly Asp Thr Ala Trp Asp Phe Gly Ser Ile Gly Gly	
420 425 430	
gtc ttc aac tcc ata ggg aaa gct gtt cac caa gtg ttt ggt ggt gcc	1344
Val Phe Asn Ser Ile Gly Lys Ala Val His Gln Val Phe Gly Gly Ala	
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Gly Ala Leu Leu Leu Trp Met Gly Ile Asn Ala Arg Asp Arg Ser Ile	
465 470 475 480	

gct ttg gcc ttc tta gcc aca gga ggt glg ctc glg ttc tta gct acc 1488
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Asn Val His Ala
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<213> Japanese encephalitis virus

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Glu Ala Ser Gln Leu Ala Glu Val Arg Ser Tyr Cys Tyr His Ala Ser
50 55 60

Val Thr Asp Ile Ser Thr Val Ala Arg Cys Pro Thr Thr Gly Glu Ala
65 70 75 80

His Asn Glu Lys Arg Ala Asp Ser Ser Tyr Val Cys Lys Gln Gly Phe
85 90 95

Thr Asp Arg Gly Trp Gly Asn Gly Cys Gly Leu Phe Gly Lys Gly Ser
100 105 110

Ile Asp Thr Cys Ala Lys Phe Ser Cys Thr Arg Lys Ala Ile Gly Arg
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Thr Ile Gln Pro Glu Asn Ile Lys Tyr Glu Val Gly Ile Phe Val His
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Gly Thr Thr Thr Ser Glu Asn His Gly Asn Tyr Ser Ala Gln Val Gly
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Ala Ser Gln Ala Ala Lys Phe Thr Val Thr Pro Asn Ala Pro Ser Ile
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Arg	Ser	Gly	Leu	Asn	Thr	Glu	Ala	Phe	Tyr	Val	Met	Thr	Val	Gly	Ser	195	200	205
Lys	Ser	Phe	Leu	Val	His	Arg	Glu	Trp	Phe	His	Asp	Leu	Ala	Leu	Pro	210	215	220
Trp	Thr	Pro	Pro	Ser	Ser	Thr	Ala	Trp	Arg	Asn	Arg	Glu	Leu	Leu	Met	225	230	235
Glu	Phe	Glu	Glu	Ala	His	Ala	Thr	Lys	Gln	Ser	Val	Val	Ala	Leu	Gly	245	250	255
Ser	Gln	Glu	Gly	Gly	Leu	His	Gln	Ala	Leu	Ala	Gly	Ala	Ile	Val	Val	260	265	270
Glu	Tyr	Ser	Ser	Ser	Val	Lys	Leu	Thr	Ser	Gly	His	Leu	Lys	Cys	Arg	275	280	285
Leu	Lys	Met	Asp	Lys	Leu	Ala	Leu	Lys	Gly	Thr	Thr	Tyr	Gly	Met	Cys	290	295	300
Thr	Glu	Lys	Phe	Ser	Phe	Ala	Lys	Asn	Pro	Ala	Asp	Thr	Gly	His	Gly	305	310	315
Thr	Val	Val	Ile	Glu	Leu	Ser	Tyr	Ser	Gly	Ser	Asp	Gly	Pro	Cys	Lys	325	330	335
Ile	Pro	Ile	Val	Ser	Val	Ala	Ser	Leu	Asn	Asp	Met	Thr	Pro	Val	Gly	340	345	350
Arg	Leu	Val	Thr	Val	Asn	Pro	Phe	Val	Ala	Thr	Ser	Ser	Ala	Asn	Ser	355	360	365
Lys	Val	Leu	Val	Glu	Met	Glu	Pro	Pro	Phe	Gly	Asp	Ser	Tyr	Ile	Val	370	375	380
Val	Gly	Arg	Gly	Asp	Lys	Gln	Ile	Asn	His	His	Trp	Tyr	Lys	Ala	Gly	385	390	395
Ser	Thr	Leu	Gly	Lys	Ala	Phe	Ser	Thr	Thr	Leu	Lys	Gly	Ala	Gln	Arg	405	410	415
Leu	Ala	Ala	Leu	Gly	Asp	Thr	Ala	Trp	Asp	Phe	Gly	Ser	Ile	Gly	Gly	420	425	430

Val Phe Asn Ser Ile Gly Lys Ala Val His Gln Val Phe Gly Gly Ala
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Ala Leu Ala Phe Leu Ala Thr Gly Gly Val Leu Val Phe Leu Ala Thr
485 490 495

Asn Val His Ala
500