Supplemental Materials:



Fig S1. Geographical map of Jianchuan country and the sampling areas.

	S		S2		
	20 508 674				
	NTD	CTD	FP	HR1	HR2 TM
JC34 : HKU2 : HKU1 : MHV-JHM : SARS-CoV : MERS-CoV :	WAITFVLMLITLYRCPFVLCNFQ WKIFYVFVLDFVCYCCDYVDFR MLIFFLDFTLAVIGDFNCTN-F MLFVFFLLDFSCLGYIGDFRCIOTV MFFFDFTLSGSDLDRCTTFDV MIHSVFLLFILTFTSSVVDVGPDSVKSACI 6	VCTDQLRQOEVYLENA LENGIFSTS	VSNA YIANAYSTRHWHCGSSSN LSNT TVIGA STNRAKWFCPTNVC ULNT TLFGY STNRAKWFCPTNVC YLNA LLL GY VJGSNYRNLALTGT YDDA LLL GY VJGSNYRNLALTGT YPDBIFR DTLYLTQDLFLFFYSNYT SSTTTYQL YVGGHGMYVYSA n t p	NST PGDNKFVGI SRPVGTG	VFVHRFNHP
JC34 : HKU2 : HKU1 : MHV-JHM : SARS-CoV : MERS-CoV :	-NW HFAAYBAAPTKK	TILPUMHR ATQASTVE OV 	YYQQDAVDVLUSEPRCEAPTNPDCS RWWQKFSFNE AHPQDAGDSS DYDHTICKSKSSRNESWHPDKS OLDYTPCKPNNSRVLGFWHDVKS ONDFFAVSKPMGPQTHTMIFDNAPNC FATYHTPATDCDDCNYNRNASLNSFKE C	-AIVNMAIECLIISTER B AFECLVIGS P S SELLPKKNFYY NYSTDW PFICLIKENFFY NYAPW TFEYISDAFSLVYERSGNEKHLRE SYFNLRNCTFMYTYNITEDEILEWFG-	TTESFSYVTGYNSE : 175 SQHKGYMFGVTGYNDF : 173
JC34 WIV19 : HKU2 : HKU1 : MHV-JHM : SARS-CoV : MERS-CoV :	INAVIHGORSFYYEFLWSNAS VRIIF PPTVFELQVD OWEYVQ ADSCMPTTFLESIVI-TLSHYVV PLTCNA ADKPSATTFLESIVI-DILTQYFV PFICTP PSGFNILKPIFKLPL-INITRATLTAFSP VDLYGGNMFQFATLPVYDTIKYYS IPHSIR g	AFCYDANGCIENIPNTSDUUST SSEAT FTGPVNAGRMTKBNVVTEISSVUULTOSSAV ISSNTDNSTLOYMVTPISKROIDIK FINRGVI AQDIWGTSAAAYBVGYLKPTIMIKYLENETI SIQSDRKAWAAFYYVKLOPLTDIJGSVOG VI 5 6 G 6	NNFVD GGFDYESOKK KNLVFELPPA TRYSYGADGFVNGDOCKLRLEDIPPG NAVDCSSSFFSBDOCKLRLEDIPFG TSAVDCSSSFFSBDOCKTKSLLPNT TSAVDCSSNFLSFKCSVKSFEIDKST TDAVDCSQNPLASKKSVKSFEIDKST RRAIDGGFNDLSOHSSYBSFDWSSG dC 6 C gé	//HGAAUPIESSUYYVANDLADGA //HGAEVEYPVAUYTVVHMSVDP //DLSGETWKEVANMHRRIPDLPDC //DLGGTWVEVAUMHRRIPDLPDC //DLGGTWVEVGVYRRVPHLPDC //JSVGSEAKBSGSUVCAGAEG-VECD //SVGSEAKBSGSUVCAGECVECD //SVGSEAKBSGSUVCAGECVECD	PSFADIPSDGTGNYGGLR <mark>H</mark> HVFNC : 303 2RPESYGGSNYCPEKRVVFSNC : 300 LDKWINNEN-VPSPLN ERKIPSOC : 352 LEEWIJTAKS-VPSPLN ERKIPOC : 354 PGEVFNATK-FPSVYA ERKKIPOC : 407 RSPLLSGTPPOVYNKKUVFNC : 407 R f NC
JC34 : HKU2 : HKU1 : MHV-JHM : SARS-CoV : MERS-CoV :	WVNYPSIFLCDGLACIFFNAT VVNMTSIFLCDGLACIFFNAT NFNDSTLLRLVHTDSSCNNFDESKAYGSCF NFNDSSLRYVQAESLSCNNIDASKAYGMCF VADMSVLYNSTFFSSCKCYGVSATKINDLCF NYNDKKLSLFSVNDFTCSQISPAALASNCY 1 3	FBEVVYNLTO-DGLINFFIRCNGLD LLDDYQHLVL NGKPNPFTECNGLN KBIVLDKFAI NSRRSDLQLGSSGFIQSSNYK GSVSYDKFAI SRRGIDLQIGNSGFIQTANYK SNVYADSFVVKGDDVRQIAPGQTGVIADYNYK SBLILDYFSYLLSMKSDLSVSSAGPISQFNYK P	VYTIVKG SAG V RYQLFDSG-OFN RIVDD VTG V RVGRG AV-NRTV IDTTSSS OLY S PAINV IN-NYM IDTATS OLY S PAINV IN-NYM IPDDFMG VIA NTRNIDA ISCNYNY QSFSNPTLILAT PHNLTIITKFLKY C t	PDAYT PDY YIT PYLK PFNLSSHSVVYS SSWNRRYGFNNFNLSSHSVVYS SSWNRYGFNDAGYFGKSKHDVAYA (KYRYLRHGKLR (SYINKCSRFLS	: 383 ::::::::::::::::::::::::::::::::::
JC34 : HKU2 : HKU1 : MHV-JHM : SARS-CoV : MERS-CoV :	-KPPSASCPIGTNYRSCBSTTVL TKPMSAYCPTGTIHRECSLWNGPHLRSARVG	DHTDWCRCSCLPDPITAYDPRSCSQKKSLVGV SGTYTCECTCKPNPFDTYDLR-CGQIKTIVNV -DDRTEVPQLVNANQ	GEHCAGFGVDEBKCGVLDGSYNVSCLC GDHCBGLGVLEDKCGNSDPHKGCSC PFERDISNVPFSPDGKPCTPPALN YSPCVSIVPSTVWBDGDYYRKQLSPLE	MECF O'FQIDRSYIVYNAKF NECF O'SWNDYODSIYDWWIADP STDAFLC SYDTCVSNNRCNIFSNF CANDSFIC SHDTCLVNDRCQIFANI CYWPLND GFYTTTGIGYQPYRVV 3GGGWLVASGSTVAMTEQLOMGFGI	TE LTV VLQPVEPE : 419 ST AFV EKNPDAPR : 405 LN TNSGTT SNDLLQPNTEVF : 617 IN TNSGTT SNDLQLPNTEVA : 628 SFELHAPATVCGPKLSTDLI : 520 GYTDTNSV PKLEFANDTKIASQ : 599 6 g c
JC34 : HKU2 : HKU1 : MHV-JHM : SARS-CoV : MERS-CoV :	LGVGKCYTDDGYPPOGILHTSNANITTFHNL GVGTYTDBKVTPOGVLYBSNFTFAQYYNV TDVGYDADDYTTTGGGFFKEVSAYYNSBOA TGVG (RYDLYTTTGGGYKEVKADYYNSBOA KNOCYNPNEN LHTGGGYLTPS-SKRFQPFO LGNG YBSTTYSRFGYCNCTVGR-OGR C 5 g63 G6	LYNGDMVSHVRIKG-IVNSVERONSF LYEGSOLKYVRILG-KVNEVAPOFEA LLYDNNGNIGFRDVTNKTNNFFOYAGR FGRDVSDFTDSVRDFKTSELDNSFOSFGVS FFVDAYONLVGYYSDDG-NYGCHRAQVSVP Y 6 C	YYSULK-TRSEVGYIYSGANONSS-L SYDVLFRSSSSFGLIMRSFDONOIRI VSAAFHONASSLALLYRNIKGSY (MN VSAAYHKEAFEPALLYRNINGSY (PTN VITPGTNASEVAVIJYODVNGTU STA VSVIYDKETKTHATHESSVACHISST LS C	VVVTESRRARARTLID SASRFAERLIPSHNGTANA N-ISLTTOPYPDSY NNISREENPLNYPDSY AIHADQLTPAWRIYSTGNNYGPOP MSQYSRSTRSMLKRRDSTYGPLOP 3	CCLVDVQLT-NNNYTTCSYPICNS : 540 CCLPNATYAPNDTMVNTNPLCDC : 531 CCVPNADNITDYSVSSCAIRMCSS : 742 CCVVNADNRTDEALENCDLRMCSS : 756 ASCLICAEHVDTSYECDIPICAS : 655 CCVUGLVNS-SLEVEDCKLPLCOS : 734 GC6 C 6G g
JC34 HKU2 : HKU1 : MHV-JHM : SARS-CoV : MERS-CoV :	LGADVNVTGM PVVGNTYI O FGADLLSNVVVRTTP K FSVDYNS PSSSSRRKRRSISASYRFVTFS LGVDYSKSRARRSVSTGYRITTEP LGASYHTVSLRSTSOKSIVA LGALPDT PSTLTPRSVRSVPGEMRLAS C	HDTDYARPILSPOINSEELOHVINVKO HDTTYVAPVTIERFTBEELEHOIVITO ENVSFVNDSIESVGGLYE KEPTVETIVGO YMPMLVNDSVOSVGGLYE OIPTNETIGHE YMMSLGADSSIAYSN-NTIAFPTNESISITT IAFNHPIQVDQLNSSYFKISEPTNESGVTE 6P 1 2 FP	VUTSADAPEVDERVICDVSVOGKE TROTTMERFISSERVICDVSKAGKN TOTNSPRVIDESLEVESNYAACHD TOTNSPRVIDESLEVESNYAACHD TOTNSPRVIDESLEVESNAAFVC GPVSMARTSVOCMVICESBE TOTTIGRVIVEROVVCNGPOREBO Gq K 6dC 56C C 1	LARNGCXCPKTVSDTKSSSLQLDYO LFRYGGCORTEADTRGAGVLDSD LSBYGTSCDNWAITNEVNLLDNM LLOYGSCONWAITNEVNLLDNM LLOYGSCONWAITNEVNLLDNM LLOYGSCOTONRAISCIAACOBN LLYG SC 6 6 D	VQGTYKTTNVDVKVPDVD : 658 VSGTYSTAAAKTSSTMPT : 647 2LHVADTMQCVTLSSNLNTNLHPD : 882 2LOVASAMQCVTLSSRLPDGISGP : 891 TREMAOKKONYKTPTLKY : 778 4 KNUTASYKSSQSSPIIPGF : 865 6 6 HR1
JC34 : HKU2 : HKU1 : MHV-JHM : SARS-CoV : MERS-CoV :	FGAPUSSMEESEPNG		EDITEKETYNCIMVIPEVNDDIIITF DDITEACYHNCILVIPEVNDAETGM RDLIGVSENCIKVLPEIDESSOISG RDLIGVSENCIKVLPEIDESSOISG RDLIGACKENCITVLPEIDENGAA RDLIGACYVAGYKVLPEINDVNMEAA RDLIGACYVAGYKVLPEINDVNMEAA DG C Q ng V6PP66 5	NESAVAGSMTAGLEGGGACHVSD GGIAAASLTIGIEGGGACHTTD TTAATVANFPPDSAAAGIP	
JC34 : HKU2 : HKU1 : MHV-JHM : SARS-CoV : MERS-CoV :		NACCISCH VOCLSENFGAISNNFLVTAERLER NAAOWESE VSCITENFGAISENFRVTSCRIJK NAAOWESE VSCITENFGAISELOETERLIA NABADNNEJNOLSNREGAISELOETERLIA NAAMNEK KUSSNEGAISEVIALTISRIJK NAAMSKASELSNTEGAISASIGDIIORLIV NA 6 L 6 FGAIS I RLd	LEACMONDRLINGRNNILONEV NYKI LEACMONDRLINGRNNNIQLEV NYKI LEACMONDRLINGRLIANAAVISOOLE VEAKAOIDRLINGRLIAINAAVISKOLE VEAKOOIDRLINGRLIANAAVISKOLE LEODAOIDRLINGRLITUNAEVACOLM GEA Q6DRLINGR6 L 56	LSISELKSQQILAQSLVNECVYAQSN IKIABINNTHRYVQSLINECVYAQSL SDISLVIFCAALAMEKVISCVKSQSP SDSTLIKFSAAQAIEKVNECVKSQST RAABINASANLAATKASECVLCQSK /RSESAALSAQLAKDKVISCVKAQSK a GNECV Q3 1	NGECCOCLHEESTMERATOCINEF : 918 NGECCOCLHVISIMONARSCHEF : 915 INNECONVENTISIMONARSCHEF : 915 INNECONVENTISIMONARSCHEF : 1145 NUTFOCREVENTISIMONARSCHEF : 1165 SECCOCTHUSEFLARENCEMEM : 1137 R FCG G H6 S q AFG 6 F HR2
JC34 : HKU2 : HKU1 : MHV-JHM : SARS-CoV : MERS-CoV :	HYPLVENNTIDVETTPCLCLGNNVCTAF HYSDIENNTIDVETTPCLCSSDELGSKC VA HPSVKSISFRTVLVSPCLCESGDVGTAF HSVVPTSSFRTANVSPCLCESGDVGTAF HVTVVBSQERNFTAFATCHEGKAYF UVGYJESNHIEVVSAYELODAAN-PTNCTAF HPP pg6c p HR2	RDELEVKTNIRSDVWHETRININFOAITV RDEVINSANLSYWOISPRNINKEENITF ROEYIKH DHWRIGSSYYYEPEID KASY VOD GEWRIGSNYYYEPID ECVIVENUTSWRIGSNYYEPID ROEVIENUTSBINORNGSSCIITT VNSYLIKTNYRIVDEWSFGSSFYAEPPITS G f6 n W 3 5 P2 63	NU-SVIVNGG NETSINGTIBGIBPT AN-VIAVSRGAN TILNRTPDIPELNA REVVEMNTCS NETARPIVINHSVER REVVMISCA NETARPVFINNSIPA DIFVSGRCD/VIGIINNTVJDPLOE LU-TKYVAPO TIONISTNLPPPLIGA N V	TPSDEBFEDLIKNITLELEOIKI TFPIEBFERFCONSSLOAIKI TSDIESEISHENSNOTSIAPNIT ILPDIKEBIDK FINGSIAPNIT SLD-SIKEBIDK FINGSIAPNIS ISTGIDGDBLDEFKNVSFSIPPFG f E SkN 3 1	NITEDELINLYYDDRDDSIST : 1048 NITEDELINLYYDDRDDSIST : 1048 NITEDELKNNTSAFUCIRNEAH : 1046 LNHHTINAFDDYYDRNIGOSIST : 1278 LDFEKINYFLDDIYSNNR ODAIK : 1295 D-ISGINASYNTOKNEDRNGVAK : 1173 S-LTQINT LDDIYSNSUSDOCYVK : 1274 1 616 e6 6
JC34 : HKU2 : HKU1 : MHV-JHM : SARS-CoV : MERS-CoV :	NVSQLHVTISEPNKYVQYIK0007401AIPL NVSNMRBUKKPORVNYVK0A0000111PI SUNNSYINUKDIGTMEMYVK00070111PI SUNNSYINUKPYGYEMYVK00070101LISP KUNSSYINUKPYGYEMYVK0007001LIGIA AUNESYIULPELGNYTYYNK0000101GFIA 6 6 6 Y Y K000501L	VIVLESFILL COATGCCCC GMLGSACNGC AITLIAGLILC LARGCCM CCLAATCAS SFIFLVLFFIC CTGCSAFKCHN ACVAYCVLFFIC CTGCGSAFKCCSG CIJAIVM JILC MSCCCCCCCCCCCCCS GLALALCFFILC CTGCTM MG-KLKONRC CC TGC C C C	TKPQTVEFEKVHVQ : 112 DCRGTKLQSYEIEKVHIQ : 112 DEYGGHHDFVIKTSHDD : 135 DEYGGHQDSIVINISAHED : 137 KYEDEDBEPVIKGVKLHYT- : 125 DRYEEYDLEPHKVHVH : 135 C	26 28 56 55 55 53	Fig. S2

Fig S2. Alignment and predicted domains and cleavage sites of AcCoV-JC34 spike protein. NTD, N-terminal domain; RBD, receptor-binding domain; HR, heptad repeat; TM, transmembrane anchor. The signal peptide corresponds to residues 1 to 19. The cleavage sites were indicated by arrows.