

Selected Sequences: 55 /Selected Residues: 128
Deleted Sequences: 0 /Deleted Residues: 22

Gaps Scores: =0= <.001 <.050 <.100 <.150 <.200 <.250 <.350 <.500 <.750 <1.00 =1=
Similarity Scores: =0= <1e-6 <1e-5 <1e-4 <.001 <.010 <.100 <.250 <.500 <.750 <1.00 =1=

	10	20	30	40	50	60	70	80	90	100	110	120									
=====+=====+=====+=====+=====+=====+=====+=====+=====+=====+=====+=====+=====																					
ACoV-WA1087	AGKQTELATNSSLLTLCA	-----	FSVDPAKTYVEAVRS	GHKPV	SN	CIKMLANGSGNGQAITNGVEANTN	QDSYG	---	GASVCIYCR	AHVCHP	----	SMDGVCRLK	KGKYVQVPIG	----	TTDPI						
BtCoV/020_16/M.dau/FIN/2016	AGKQTEHASNSSILTLCS	-----	FAVDPAKTYIDAVKS	GQKPV	GN	CIKMLNSGSGNGMAITNGVEATGN	QDSYG	---	GASVCLYCR	AHVCHP	----	AMDGICRLK	KGKYVQMPIG	----	TTDPI						
PEDV	AGKQTEQAINSSLLTLCA	-----	FAVDPAKTYIDAVKS	GHKPV	GN	CVKMLANGSGNGQAVTNGVEASTN	QDSYG	---	GASVCLYCR	AHVCHP	----	SMDGFCRLK	KGKYVQVPLG	----	TVDPI						
Sc-BatCoV_512	AGKQTEQATNSSLLTLCA	-----	FAVDPPKTYLDAVKS	GHRPV	GN	CVKMLANGSGNGQAITNGVEASTN	QDSYG	---	GASVCLYCR	AHVCHP	----	DMDGFCRLK	RGKYVQVPLG	----	TLDPI						
ACoV-WA3607	AGKQTELASNSPLLTMCA	-----	FAVDPAKTYVDAVKKGVKPV	GN	CVKMLNSGSGTGQAITTVGVEANTN	QESYG	---	GASVCLYCR	AHVCHP	----	TMDGACRFR	RGKYVQVPIG	----	TPDPI							
BtRf-AlphaCoV	AGKQTELATNSPLLTMCA	-----	FSVDPAKTYLDAVKG	GVKPV	GN	CIKMLNSGAGTGQAITTVGVESNTN	QDSYG	---	GASVCLYCR	AHVCHP	----	SMDGRCRLK	KGKYVQVPLG	----	TIDPI						
HipPBCoV-CHB25	AGKQTEMAVNSPLLTMCA	-----	FSVDPAKTYVDAVKG	AKPV	GN	CIKMLNSGSGSQAITNGVEANTN	QDSYG	---	GSSVCLYCR	AHVCHP	----	SMDGHCR	LKGKYVQVPSG	----	TIDPI						
BtCoV_HKU10	AGKQTELAVNSPLLTMCA	-----	FAVDPAKTYLDAVKG	AKPV	GN	CIKMLANGSGTGQAVTTGVEANTN	QDSYG	---	GASVCLYCR	AHVCHP	----	SMDGYCKL	KGRYVQVPMG	----	TIDPI						
BtMr-AlphaCoV	AGKQTEQAANSSLLTMCA	-----	FAVDPAKCYLDAVKG	GVKPV	GN	CIKMLNSGSGNGQAITNGVESNTS	QDTYG	---	GASVCLYCR	AHVCHP	----	SMDGFCRLK	KGKYVQVPLG	----	TLDPI						
Mi-BatCoV_1A	AGKQTELVVNSSLLTLCS	-----	FAVDPAKCYLDAVKS	GVKPV	NN	CVKMLNSGSGTGQAVTTGVEANTN	QDSYG	---	GASVCLYCR	AHVCHP	----	SIDGFCQF	KGRYVQIPVG	----	TVDPI						
Mi-BatCoV_HKU8	AGTQTELVANSSLLTMCS	-----	FAVDPRKCYLDAVKN	GVKPV	TN	CVKMLNSGSGTGQAVTTGVEANTN	QDSYG	---	GASVCLYCR	AHVCHP	----	SMDGFCQF	KGRYVQVPIG	----	TVDPI						
ACoV-WA2028	AGRQTELVANSSLLTLCA	-----	FAVDPEKTYIDAVKS	GTKPV	GN	CVKMLNSGAGNGQAVTNSVEANTN	QDSYG	---	GASVCLYCR	AHVCHP	----	TMDGQCRFR	RGKYVQVPTG	----	TTDPI						
BtNv-AlphaCoV	AGKQTELATNSSLLTLCA	-----	FAVDPPKMYIDSVKAG	IKPV	GN	CVKMLNSGAGNGQAITTTSVEANTN	QDSYG	---	GASVCLYCR	AHVCHP	----	GMDGRCQF	KGRYVQVPLG	----	TADPI						
TyBCoV-HKU33	AGKQTELASNCALLTLCS	-----	FAVDPAKMYIDSVKS	GMPV	GN	CVKMLNSGAGNGQAVTTGVEANTN	QDSYG	---	GASVCLYCR	AHVCHP	----	SMDGQCKY	KGRYVQVPLG	----	TLDPI						
PK-BatCoV	AGKQTEIAANSGLLTLCA	-----	FSPDPAKMYLDAVKS	GIKPV	GN	CVKMLNSGAGNGQAITTVGVEANTN	QDSYG	---	GASVCLYCR	AHVCHP	----	AMDGRCQF	KGRYVQIPVG	----	TVDPI						
Rh-BatCoV_HKU2	AGKQTELACNSSLLTLCA	-----	FAVDPAKAYVSAVKQ	GAKPV	GN	CVKMLANGSGSGQAVTNGVEANMN	QDSYG	---	GASVCIYCR	AHVCHP	----	AMDGACRFR	KGKYVQIPIG	----	VNDPI						
BtCoV_CDPHE15	AGKQTEQVMNSLLTMCA	-----	FSTIDPAKTYLDAVKS	GVKPI	GN	CVKMLANGAGNGQAITNGVEANTS	QDSYG	---	GASVCLWCR	AYVEHP	----	AMDGFC	KYRGKYVQVPIG	----	TVDPI						
BtCoV-AMA-L-F	AGRQTEVATNSSLLTVCA	-----	FAVDPAAAYVDAVKS	GIKPI	GN	CVKMLANGSGNGQAITNGVEANTA	QDSYG	---	GASVCLYCR	CHIDHP	----	GMDGRC	KFKKYVQVPM	----	VTDPI						
BtKYNL63	AGKQTELAANSGLLTVCA	-----	FAVDPAAAYLDAVKQ	GAKPV	GN	CVKMLTNGAGNGQAVTATVDANS	NQDSYG	---	GASVCLYCR	AHVCHP	----	TMDGYCKY	KGKYVQIPMG	----	CMDPI						
HCoV_NL63	AGKQTELAVNSGLLTACA	-----	FSVDPATTYLEAVKH	GAKPV	SN	CIKMLNSGAGNGQAITTTSVDANTN	QDSYG	---	GASICLYCR	AHVCHP	----	SMDGYCKF	KGKCVQVPIG	----	CLDPI						
HCoV_229E	AGKQTEFVSNSHLLTHCS	-----	FAVDPAAAYLDAVKQ	GAKPV	GN	CVKMLTNGSGSQAITCTIDISNTT	QDTYG	---	GASVCIYCR	AHVCHP	----	TMDGFCQY	KGKWWQVPIG	----	TNDPI						
MCoV	AGKQTEHPSNSSLLTLCA	-----	FAPEPAKAYVELVKK	GMQPV	NN	CVKMLNSGSGNGMAITNGVEATPN	QDSYG	---	GASVCIYCR	SHTAHP	----	SIDGMC	RFKGKFVQVPAG	----	TADPI						
TGEV	AGKPTEHPSNSSLLTLCA	-----	FSPDPAKAYVDAVKR	GMQPV	NN	CVKMLNSGAGNGMAVTNGVEANTQ	QDSYG	---	GASVCIYCR	CHVEHP	----	AIDGLCR	YKGFVQIPTG	----	TQDPI						
Sm-CoV_X74	AGRPTEFPENSNLLSICA	-----	FAVDPAKAYLDAIKS	GVKPL	AN	CIKMLNSGSGNGQAVSYTVDAKTN	QDSYG	---	GASVCIYCR	AYVEHP	----	TVDGLCQF	KGRFVQVPLG	----	TKDPV						
LRNV	AGKPTEYATDCQLLTLCA	-----	FAVDPKDAYLTAVRQ	GHKPL	SN	CIKMINNGSGNGLAITHRVEANTV	QDSYG	---	GASCCLYCR	ASVEHP	----	GMNGIC	NLRGKYVQVPTG	----	TTDPV						
Sa-CoV_T14	AGKSTEVPENVNILSMCA	-----	FSVDPEKTYLDYVKS	GQNPL	KS	CVKMLTDRTGNMAITPRPEATYN	QDSYG	---	GASVCIYCR	SYTAHP	----	GYDGVCKL	KGKFVQVPKG	----	TVDPV						
Bat_Hp-BetaCoV	AGKPTEVAANSKCLTFCA	-----	FAVDPEKAYFDFVNS	GGQPL	NN	CVRVLCTHTGTGRAITADPEATADQ	ESYG	---	GSSCCLYCR	CHISHP	----	SHNGLCKY	KGKYVQIPNVCTNDPV								
SARSr-CoV	AGNATEVPANSTVLSFCA	-----	FAVEPAKAYKDYLAS	GGQPI	TN	CVKMLCTHTGTGQAITVTPEANMDQ	ESFG	---	GASCCLYCR	CHIDHP	----	NPKGFCDF	KGKYVQIPTTCVNDPV								
SARS-CoV	AGNATEVPANSTVLSFCA	-----	FAVDPAKAYKDYLAS	GGQPI	TN	CVKMLCTHTGTGQAITVTPEANMDQ	ESFG	---	GASCCLYCR	CHIDHP	----	NPKGFCDL	KGKYVQIPTTCANDPV								
SARS-CoV-2	AGNATEVPANSTVLSFCA	-----	FAVDAKAYKDYLAS	GGQPI	TN	CVKMLCTHTGTGQAITVTPEANMDQ	ESFG	---	GASCCLYCR	CHIDHP	----	NPKGFCDL	KGKYVQIPTTCANDPV								
Ei-BatCoV_C704	AGSATEVTSNSSILSLCA	-----	FSVDPEATYKEYVDN	GGAPI	GN	CVKMLTPHTGTGLAVTAKPDANMEQ	ESFG	---	GASCCLYCR	CHIEHP	----	GPNGVCKF	KGKFVQLPLAGVQDPI								
Ro-BatCoV_GCCDC1	AGSATEVASNSAILSLCA	-----	FSVDPEATYKDYL	DNGGTP	IGN	CVKMLTTHGTGTGLALTAKPDASIDQ	ESFG	---	GASCCYICR	CHIEHP	----	GASGVCKF	KGKFVQIPLCGVDPV								
Ro-BatCoV_HKU9	AGSATEVASNSSILSLCS	-----	FSVDPEATYKDYL	DNGGSP	IGN	CVKMLTPHTGTGLAITAKPDANIDQ	ESFG	---	GASCCLYCR	CHIEHP	----	GASGVCKY	KGKFVQIPLVGVNDPI								
EriCoV	AGSNTEYASNSSVLSLVN	-----	FAVDPAKAYTDYVN	AGGAPLT	N	CVKMLTPKTGTGIAISVKPESNLDQ	ETYG	---	GASVCLYCR	AHIEHP	----	DVSGVCKF	KGKFVQIPAQCTRDPV								
MERS-CoV	AGSNTEFASNSSVLSLVN	-----	FTVDPQKAYLDFVN	AGGAPLT	N	CVKMLTPKTGTGIAISVKPESTADQ	ETYG	---	GASVCLYCR	AHIEHP	----	DVSGVCKY	KGKFVQIPAQCVRDPV								
Pi-BatCoV_HKU5	AGSNTEFAINSSVLSAVT	-----	FSVDPGKAYLDFVN	AGGAPLT	N	CVKMLTPKTGTGIAISVKPEANADQ	DTYG	---	GASVCLYCR	AHIEHP	----	DVTGVCKF	KGKFVQVPLH	----	IRDPV						
Ty-BatCoV-HKU4	AGANTEFASNSTVLTIVA	-----	FAVDPAKAYLDYVG	SGGTP	LS	NYVKMLAPKTGTGVAISVKPEATADQ	ETYG	---	GASVCLYCR	AHIEHP	----	DVSGVCKY	KTRFVQIPAH	----	VRDPV						
ChRCoV_HKU24	AGHATEYAANSAILSLCA	-----	FSVDPKKTYLDYIQ	GGGPI	AN	CVKMLCDHAGTGMAITVKPDATTN	QDSYG	---	GASVCIYCR	ARIEHP	----	DVDGLCKL	RGKFVQVPIG	----	IKDPV						
MHV	AGTATEYASNAILSLCA	-----	FSVDPKKTYLDYIQ	GGVP	TN	CVKMLCDHAGTGMAITIKPEATTN	QDSYG	---	GASVCIYCR	SRVEHP	----	DVDGLCKL	RGKFVQVPLG	----	IKDPV						
MrufCoV_2JL14	AGTPTEYASNSSVLSLCA	-----	FSVDPKKTYLDFV	QQGGVPL	TN	CVKMLCDHAGTGMAITVKPEATTN	QDSYG	---	GASVCIYCR	ARVEHP	----	DVDGLCKL	RGKFVQVPVG	----	IKDPV						
HCoV_OC43	AGTATEYASNSSILSLCA	-----	FSVDPKKTYLDFIQ	GGGTP	IAN	CVKMLCDHAGTGMAITVKPDATTS	QDSYG	---	GASVCIYCR	ARVEHP	----	DVDGLCKL	RGKFVQVPVG	----	IKDPV						
HCoV_HKU1	AGVATEYAANSSILSLCA	-----	FSVDPKKTYLDYIQ	GGGVP	I	N	CVKMLCDHAGTGMAITIKPEATIN	QDSYG	---	GASVCIYCR	ARVEHP	----	DVDGICKL	RGKFVQVPLG	----	IKDPI					
BcanCoV_CB17	KGHDTEEVEAVGILSLCS	-----	FAVDPASCYKEYI	AGGGKPL	AN	CVKMLTVHNGSGFAITTKPSPTPD	QDSYG	---	GASVCLYCR	AHVCHP	----	NMDGKCPY	KGSFVQIPSV	----	EQDPV						
DuCoV_2714	KGHETEELESVGILSLCA	-----	FAVNPEETYLYKYV	SAGNQPL	GN	CVKMLTVHNGNGFAITTKPSPTPD	QDSYG	---	GASVCLYCR	AHVCHP	----	GASGTL	DGRC	PFKGSFVQIPTS	----	EKDPV					
ACoV_9203	KGHETEEVDAVGILSLCS	-----	FAVDPADTYCKY	VAAAGNQPL	GN	CVKMLTVHNGSGFAITSKPSPTPD	QDSYG	---	GVSVCLYCR	AHVCHP	----	GGAGNLD	DARCQF	KGSFVQIPTT	----	EKDPV					
IBV	KGHETEEVDAVGILSLCS	-----	FAVDPADTYCKY	VAAAGNQPL	GN	CVKMLTVHNGSGFAITSKPSPTPD	QDSYG	---	GASVCLYCR	AHVCHP	----	GSVGNLD	DARCQF	KGSFVQIPTT	----	EKDPV					
BWCoV	HGVSTESVENCGILSLCS	-----	FALDAKECYLEYI	KEGGAP	LS	NCVKMLTLHTGSGAAVTVKPAPTPEQ	DSFG	---	GASVCLYCR	AHISHP	----	GVIYGV	CQFKGKFVQIPVE	----	EKDPV						
CMCoV_HKU21	TGTHVEYQENASLLTYLA	-----	FAVNPKEAYLK	HKVADGGKPI	QGV	IQMIAP	---	IGSGFAVT	TKPOP	NEMQ	YSYG	---	GASVCLYCR	AHITHP	----	GVDGRC	VYKGRFVHIDKD	----	KEPV		
BulCV_HKU11	NGTQIEYQENASLLTYLA	-----	FAVNPKEAYLK	HLADGGKPI	QGC	IQMIAS	---	LGPGFAVT	TKPOP	NEHQ	FSYG	---	GASICLYCR	AHIPHP	----	GVDGRC	VYKGRFVHIDKD	----	KEPV		
WECoV_HKU16	NGTQIEYQENASLLTYLA	-----	FAVDPKAAYLK	HLADGGKPI	QGC	IQMIAT	---	LGPGFAVT	TKPOP	NEHQ	FSYG	---	GASICLYCR	AHIPHP	----	GVDGRC	TYKGRFVQIDKD	----	KEPV		
PoCoV_HKU15	SGTQIEYQONASLLTYLA	-----	FAVDPKTAYLK	HLADGGSP	IQGC	IQMIAT	---	MGP	PGFAVT	TKPOP	NEHQ	FSYG	---	GASICLYCR	AHIPHP	----	GVDGRC	CPYKGRFVHIDKD	----	KEPV	
MunCV_HKU13	NGTHIEYQENASLLTYLA	-----	FAVDPKAAYLK	HLADGGKPI	QGC	VQMVAA	---	MGP	PGFAVT	IKPOP	SEHQ	NSYG	---	GASICLYCR	AHIPHP	----	GVDGRC	CPYKGRFVQIDKD	----	KEPV	
NHCoV_HKU19	SGTSVEYQENNSLLTYLA	-----	FAVNPREAYLA	HSN	GGKPI	QGA	VRVIA	---	QGE	GF	FAVT	TKPOP	NAMQ	HAYG	---	SMDGRC	NYKGRFVHIDKD	----	LEPT		
WiCoV_HKU20	NGTAIEYQONASLLTYLA	-----	FAADPKDAYLK	HKVQAGGKPL	M	GA	VKMVAP	---	IGEG	FAVT	TKPOP	NANQ	HSYG	---	GASICVYCR	AHVCHP	----	TVNGQCLY	KGRFVQIDKD	----	LDPF
PsNV	STNLCILCGVPSVVS	----	CADCVRKFPLCC	SCLYHHVADTNH	STIQSF	NEMKCNAPGCEVS	-----	DCRLLSYGLSSGNDGSMRCEVH	-----	-----	-----	-----	SSSSV								

Selected Cols:

Gaps Scores:
Similarity Scores: