



ACE2_HUMAN β 3 η 4 α 10 α 11

250 260 270 280 290

ACE2_HUMAN HAYVRAKLMNAYPSYISPTIGCLPAHLIGDMWGRFWTLYSLTVPFGQKPNIDVTDAMVD

ACE2_RAT HAYVRAKLMVYPSYISPTIGCLPAHLIGDMWGRFWTLYSLTVPFLQKPNIDVTDAMVN

ACE2_MOUSE HAYVRAKLMDTYPSYISPTIGCLPAHLIGDMWGRFWTLYSLTVPFAGQKPNIDVTDAMMN

ACE2_Rabbit HAFVRAKLMDAYPSYISPTIGCLPAHLIGDMWGRFWTLYSLTVPFAGQKPNIDVTDAMVN

ACE2_DOG_domestic_ HAYVRAKLMDTYPSYISPTIGCLPAHLIGDMWGRFWTLYSLTVPFAGQKPNIDVTDAMVN

ACE2_COW HAYVRAKLMHTYPSYISPTIGCLPAHLIGDMWGRFWTLYSLTVPFAGQKPNIDVTDAMVN

ACE2_Panda_Giant HAYVRAKLMDTYPSYISPTIGCLPAHLIGDMWGRFWTLYSLTVPFAGQKPNIDVTDAMVN

ACE2-Guinea_pig HAYVRAKLMETYPSTRISPTIGCLPAHLIGDMWGRFWTLYSLTVPFAGQKPNIDVTDAMES

ACE2_Sheep HAYVRAKLMDTYPSYISPTIGCLPAHLIGDMWGRFWTLYSLTVPFAGQKPNIDVTDAMVN

ACE2_PIG HAYVRAKLMDAYPSYISPTIGCLPAHLIGDMWGRFWTLYSLTVPFAGQKPNIDVTDAMVN

ACE2-Horse HAYVRAKLMDTYPSYISPTIGCLPAHLIGDMWGRFWTLYSLTVPFAGQKPNIDVTDAMVD

ACE2_LEAST-HORSESHOE-BAT HAYVRAKLMDTYPLHISPTIGCLPAHLIGDMWGRFWTLYSLTVPFAGQKPNIDVTDAMVK

ACE2_CHINESE-HORSESHOE-BAT HAYVRAKLMDTYPLHISPTIGCLPAHLIGDMWGRFWTLYSLTVPFAGQKPNIDVTDAMVK

ACE2_CAT HAYVRAKLMDTYPSYISPTIGCLPAHLIGDMWGRFWTLYSLTVPFAGQKPNIDVTDAMVN

ACE2_CIVET HAYVRAKLMDTYPSYISPTIGCLPAHLIGDMWGRFWTLYSLTVPFAGQKPNIDVTDAMVN

ACE2_MALAYAN_PANGOLIN HAYVRAKLMDNYPSTISPTIGCLPAHLIGDMWGRFWTLYSLTVPFAGQKPNIDVTDAMVN

ACE2_HUMAN α 12 α 13 β 4 β 5

300 310 320 330 340 350

ACE2_HUMAN QAWDAQRIFKEAEKFFVSVGLPNTQGFWE NSMLTDPGNVQKAVCHPTAWDLGKGFDFRIL

ACE2_RAT QSWDAERIFKEAEKFFVSVGLPMTQGFWNSMLTEPGDDRKVVCHPTAWDLGHGDFRIK

ACE2_MOUSE QGWDAERIFQEAKEFFVSVGLPMTQGFWNSMLTEPADGRKVVCHPTAWDLGHGDFRIK

ACE2_Rabbit QGWDAERIFKEAEKFFVSVGLPMTQGFWE NSMLTEPGDGRKVVCHPTAWDLGKGFDFRIK

ACE2_DOG_domestic_ QSWDAERIFKEAEKFFVSVGLPNTQGFWE NSMLTEPGDGRKVVCHPTAWDLGKGFDFRIK

ACE2_COW QSWDAERIFKEAEKFFVSVGLPNTQGFWE NSMLTEPGDGRKVVCHPTAWDLGKGFDFRIK

ACE2_Panda_Giant QNWDARLIFKEAEKFFVSVGLPNTQGFWE NSMLTEPGDGRKVVCHPTAWDLGKGFDFRIK

ACE2-Guinea_pig QSWDAERIFKEAEKFFVSVGLPMTQGFWE NSMLTEPGDGRKVVCHPTAWDLGKGFDFRIK

ACE2_Sheep QSWDAERIFKEAEKFFVSVGLPNTQGFWE NSMLTEPGDGRKVVCHPTAWDLGKGFDFRIK

ACE2_PIG QSWDAERIFKEAEKFFVSVGLPNTQGFWE NSMLTEPGDGRKVVCHPTAWDLGKGFDFRIK

ACE2-Horse QSWDAERIFKEAEKFFVSVGLPNTQGFWE NSMLTEPGDGRKVVCHPTAWDLGKGFDFRIK

ACE2_LEAST-HORSESHOE-BAT QGWDAERIFKEAEKFFVSVGLPNTQGFWE NSMLTEPGDGRKVVCHPTAWDLGKGFDFRIK

ACE2_CHINESE-HORSESHOE-BAT QGWDAERIFKEAEKFFVSVGLPNTQGFWE NSMLTEPGDGRKVVCHPTAWDLGKGFDFRIK

ACE2_CAT QSWDAERIFKEAEKFFVSVGLPNTQGFWE NSMLTEPGDGRKVVCHPTAWDLGKGFDFRIK

ACE2_CIVET QNWDARLIFKEAEKFFVSVGLPNTQGFWE NSMLTEPGDGRKVVCHPTAWDLGKGFDFRIK

ACE2_MALAYAN_PANGOLIN QTWDAERIFKEAEKFFVSVGLPMTQGFWE NSMLTEPGDGRKVVCHPTAWDLGKGFDFRIK

* 2 *** *

ACE2_HUMAN α 14 η 5 α 15 α 16

360 370 380 390 400 410

ACE2_HUMAN MCTKVTMDDFLTAHHEMGGHIQYDMAYAAQPFLLRNGANEGFHEAVGEIMSLSAATPKHLK

ACE2_RAT MCTKVTMDNFLTAAHHEMGGHIQYDMAYAKQPFLLRNGANEGFHEAVGEIMSLSAATPKHLK

ACE2_MOUSE MCTKVTMDNFLTAAHHEMGGHIQYDMAYARQPFLLRNGANEGFHEAVGEIMSLSAATPKHLK

ACE2_Rabbit MCTKVTMDNFLTAAHHEMGGHIQYDMAYATQPFLLRNGANEGFHEAVGEIMSLSAATPKHLK

ACE2_DOG_domestic_ MCTKVTMDDFLTAHHEMGGHIQYDMAYAAQPFLLRNGANEGFHEAVGEIMSLSAATPKHLK

ACE2_COW MCTKVTMDDFLTAHHEMGGHIQYDMAYAAQPFLLRNGANEGFHEAVGEIMSLSAATPKHLK

ACE2_Panda_Giant MCTKVTMDDFLTAHHEMGGHIQYDMAYAEQPFLLRNGANEGFHEAVGEIMSLSAATPKHLK

ACE2-Guinea_pig MCTKVTMDHFLTAAHHEMGGHIQYDMAYAIQPFLLRDGANEGFHEAVGEIMSLSAATPKHLK

ACE2_Sheep MCTKVTMDDFLTAHHEMGGHIQYDMAYATQPFLLRNGANEGFHEAVGEIMSLSAATPKHLK

ACE2_PIG MCTKVTMDDFLTAHHEMGGHIQYDMAYAIQPFLLRNGANEGFHEAVGEIMSLSAATPKHLK

ACE2-Horse MCTKVTMDDFLTAHHEMGGHIQYDMAYAVQPFLLRNGANEGFHEAVGEIMSLSAATPKHLK

ACE2_LEAST-HORSESHOE-BAT MCTKVTMEDDFLTAHHEMGGHIQYDMAYASQPFLLRNGANEGFHEAVGEIMSLSAATPKHLK

ACE2_CHINESE-HORSESHOE-BAT MCTKVTMEDDFLTAHHEMGGHIQYDMAYASQPFLLRNGANEGFHEAVGEIMSLSAATPKHLK

ACE2_CAT MCTKVTMDDFLTAHHEMGGHIQYDMAYAVQPFLLRNGANEGFHEAVGEIMSLSAATPKHLK

ACE2_CIVET MCTKVTMDDFLTAHHEMGGHIQYDMAYAAQPFLLRNGANEGFHEAVGEIMSLSAATPKHLK

ACE2_MALAYAN_PANGOLIN MCTKVTMDDFLTAHHEMGGHIQYDMAYAMQPFLLRNGANEGFHEAVGEIMSLSAATPKHLK

2

ACE2_HUMAN α 17 α 18 η 6 α 19

420 430 440 450 460 470

ACE2_HUMAN SIGLLSPDFQEDNETEINFLKQALTIVGTLPFTYMLEKWRWMMVFKGEIPKQDWMKQKWE

ACE2_RAT SIGLLPSNDFQEDNETEINFLKQALTIVGTLPFTYMLEKWRWMMVFDQKIPREQWTKKWE

ACE2_MOUSE SIGLLSPDFQEDNETEINFLKQALTIVGTLPFTYMLEKWRWMMVFRGKIPKEQWTKKWE

ACE2_Rabbit SIGLLPYDFHEDNETEINFLKQALTIVGTLPFTYMLEKWRWMMVFKGEIPKEQWTKKWE

ACE2_DOG_domestic_ NIGLLPSPDFQEDNETEINFLKQALTIVGTLPFTYMLEKWRWMMVFKGEIPKQDWMKQKWE

ACE2_COW ALGLLAPDFHEDNETEINFLKQALTIVGTLPFTYMLEKWRWMMVFKGEIPKQDWMKQKWE

ACE2_Panda_Giant NIGLLPSPDFSEDNETEINFLKQALTIVGTLPFTYMLEKWRWMMVFDQKIPKEQWTKKWE

ACE2-Guinea_pig SIGLLPDPDFHEDNETEINFLKQALTIVGTLPFTYMLEKWRWMMVFRGKIPKSSGLKNVA

ACE2_Sheep ALGLLAPDFYEDNETEINFLKQALTIVGTLPFTYMLEKWRWMMVFKGEIPKQDWMKQKWE

ACE2_PIG ALGLLPDPDFYEDNETEINFLKQALTIVGTLPFTYMLEKWRWMMVFKGEIPKEQWTKKWE

ACE2-Horse AIGLLPDPDFYEDNETEINFLKQALTIVGTLPFTYMLEKWRWMMVFKGEIPKEEWMKQKWE

ACE2_LEAST-HORSESHOE-BAT TMGLLSPDFREDNETEINFLKQALNIVGTLPFTYMLEKWRWMMVFKGEIPKEEWMKQKWE

ACE2_CHINESE-HORSESHOE-BAT TMGLLSPDFREDNETEINFLKQALNIVGTLPFTYMLEKWRWMMVFKGEIPKEEWMKQKWE

ACE2_CAT TIGLLSPDFSEDNETEINFLKQALTIVGTLPFTYMLEKWRWMMVFKGKIPKEQWTKKWE

ACE2_CIVET TIGLLSPDFSEDNETEINFLKQALTIVGTLPFTYMLEKWRWMMVFKGKIPKEQWTKKWE

ACE2_MALAYAN_PANGOLIN NIGLLPDPDFYEDNETEINFLKQALTIVGTLPFTYMLEKWRWMMVFSQIPKEQWTKKWE

ACE2_HUMAN $\beta 6$ $\eta 7$ $\alpha 20$ $\alpha 21$

480 490 500 510 520 530 2

ACE2_HUMAN MKREI IGVVVEPVP HDETYCDPAS LFHVSNDYSFIRYYTRT IYQFQFQ EALCQA AKHEGPL

ACE2_RAT MKREI IGVVVEPLPHDETYCDPAS LFHVSNDYSFIRYYTRT IYQFQFQ EALCQA AKHDGPL

ACE2_MOUSE MKREI IGVVVEPLPHDETYCDPAS LFHVSNDYSFIRYYTRT IYQFQFQ EALCQA AKYNGSL

ACE2_Rabbit MKREI IGVVVEPMPHDETYCDPA LFHVANDYSFIRYYTRT IYQFQFQ EALCQA AQHEGPL

ACE2_DOG_domestic_ MKRNI IGVVVEPVP HDETYCDPAS LFHVANDYSFIRYYTRT IYQFQFQ EALCQI AKHEGPL

ACE2_COW MKREI IGVVVEPLPHDETYCDPA LFHVANDYSFIRYYTRT IYQFQFQ EALCQT AKHEGAL

ACE2_Panda_Giant MKRD IGVVVEPLPHDETYCDPAS LFHVANDYSFIRYYTRT IYQFQFQ EALCQI AKHEGPL

ACE2-Guinea_pig DEVKI IGVVVEPLPHDETYCDPAS LFHVSNDYSFIRYYTRT IYQFQFQ EALCQA ANHVGPL

ACE2_Sheep MKREI IGVVVEPLPHDETYCDPA LFHVANDYSFIRYYTRT IYQFQFQ EALCQA AKHEGAL

ACE2_PIG MKREI IGVVVEPLPHDETYCDPA LFHVANDYSFIRYYTRT IYQFQFQ EALCRT AKHEGPL

ACE2-Horse MKREI IGVVVEPVP HDETYCDPA LFHVANDYSFIRYYTRT IYQFQFQ EALCQT AKHEGPL

ACE2_LEAST-HORSESHOE-BAT MKREI IGVVVEPVP HDETYCDPAS LFHVANDYSFIRYYTRT IYQFQFQ EALCRI AQHGNPL

ACE2_CHINESE-HORSESHOE-BAT MKRK IGVVVEPVP HDETYCDPAS LFHVANDYSFIRYYTRT IYQFQFQ EALCRI AQHDGPL

ACE2_CAT MKREI IGVVVEPVP HDETYCDPAS LFHVANDYSFIRYYTRT IYQFQFQ EALCRI AKHEGPL

ACE2_CIVET MKRNI IGVVVEPVP HDETYCDPAS LFHVANDYSFIRYYTRT IYQFQFQ EALCQT AKHEGPL

ACE2_MALAYAN_PANGOLIN MKREI IGVVVEPVP HDETYCDPAS LFHVANDYSFIRYYTRT IYQFQFQ EALCQT AKHEGPL

3

ACE2_HUMAN $\eta 8$ $\alpha 22$ $\alpha 23$ $\alpha 24$

540 550 560 570 580 590

ACE2_HUMAN HKCDISNSTEAGQK LFNMLRLGKSE PWTLALLENVVGAKNMDVRPLLNYFEPLFTWLKDON

ACE2_RAT HKCDISNSTEAGQK LFNMLSLGNSGPWTLALLENVVGSRNMDVKPPLLNYFQPLFDWLKEON

ACE2_MOUSE HKCDISNSTEAGQK LKMLSLGNSGPWTKALENVVGARNMDVKPPLLNYFQPLFDWLKEON

ACE2_Rabbit HKCDISNSTEAGQK LFNMLRLGKSE PWTLALLENVVGAKNMDVRPLLNYFEPLFTWLKEON

ACE2_DOG_domestic_ HKCDISNSTEAGQK LFNMLRLGKSE PWTLALLENVVGAKNMDVRPLLNYFEPLFTWLKEON

ACE2_COW FKCDISNSTEAGQK LQMLRLGKSE PWTLALLENVVGAKNMDVRPLLNYFEPLFTWLKEON

ACE2_Panda_Giant HKCDISNSTEAGQK LQMLRLGKSE PWTLALLENVVGAKNMDVRPLLNYFEPLFTWLKEON

ACE2-Guinea_pig HKCDISNSTEAGQK LFNMLRLGKSE PWTLALLENVVGAKNMDVRPLLNYFEPLFTWLKDON

ACE2_Sheep FKCDISNSTEAGQK LQMLRLGKSE PWTLALLENVVGAKNMDVRPLLNYFEPLFTWLKEON

ACE2_PIG YKCDISNSTEAGQK LQMLSLGKSE PWTLALLENVVGKTMDDVKPPLLNYFEPLFTWLKDON

ACE2-Horse HKCDISNSTEAGQK LQMLSLGKSE PWTLALLENVVGKTMDDVKPPLLNYFEPLFTWLKDON

ACE2_LEAST-HORSESHOE-BAT HKCDISNSTEAGQK LQMLSLGKSE PWTLALLENVVGKTMDDVKPPLLNYFEPLFTWLKDON

ACE2_CHINESE-HORSESHOE-BAT HKCDISNSTEAGQK LQMLSLGKSE PWTLALLENVVGKTMDDVKPPLLNYFEPLFTWLKDON

ACE2_CAT HKCDISNSTEAGQK LQMLSLGKSE PWTLALLENVVGKTMDDVKPPLLNYFEPLFTWLKDON

ACE2_CIVET HKCDISNSTEAGQK LQMLSLGKSE PWTLALLENVVGKTMDDVKPPLLNYFEPLFTWLKDON

ACE2_MALAYAN_PANGOLIN HKCDISNSTEAGQK LQMLSLGKSE PWTLALLENVVGKTMDDVKPPLLNYFEPLFTWLKDON

3

ACE2_HUMAN $\eta 9$ TT

600 610 620 630 640 650

ACE2_HUMAN KNSFVGWSTTDWSPYADQSIKVRISLKSALGDKAYEWNNDNEMYLFRSSVAYAMRQYFLKVK

ACE2_RAT RNSFVGWSTTDWSPYADQSIKVRISLKSALGKNAYEWNNDNEMYLFRSSVAYAMRQYFVSREK

ACE2_MOUSE RNSFVGWSTTDWSPYADQSIKVRISLKSALGANAYEWNNDNEMYLFRSSVAYAMRQYFSIK

ACE2_Rabbit RNSFVGWSTTDWSPYADQSIKVRISLKTALGDKAYEWNNDSEMYLFRSSVAYAMRQYFSEVK

ACE2_DOG_domestic_ RNSFVGWSTTDWSPYADQSIKVRISLKSALGDKAYEWNNDNEMYLFRSSVAYAMRQYFSEVK

ACE2_COW RNSFVGWSTTDWSPYADQSIKVRISLKSALGKNAYEWNNDNEMYLFRSSVAYAMRQYFSEAR

ACE2_Panda_Giant RNSFVGWSTTDWSPYADQSIKVRISLKSALGDKAYEWNNDNEMYLFRSSVAYAMRQYFSEAK

ACE2-Guinea_pig RNSFVGWSTTDWSPYADQSIKVRISLKSALGDDAYKWDNEMYLFRSSVAYAMRQYFLDVK

ACE2_Sheep RNSFVGWSTTDWSPYADQSIKVRISLKSALGKNAYEWNNDNEMYLFRSSVAYAMRQYFLKER

ACE2_PIG GNSFVGWSTTDWSPYADQSIKVRISLKSALGDKAYEWNNDNEMYLFRSSVAYAMRQYFSSAK

ACE2-Horse KNSFVGWSTTDWSPYADQSIKVRISLKSALGDKSEYWNNDNEMYLFRSSVAYAMRQYFLKAK

ACE2_LEAST-HORSESHOE-BAT RKSFVGWSTTDWSPYADQSIKVRISLKSALGKNAYEWNNDNEMYLFRSSVAYAMRQYFLKTK

ACE2_CHINESE-HORSESHOE-BAT RKSFVGWSTTDWSPYADQSIKVRISLKSALGKNAYEWNNDNEMYLFRSSVAYAMRQYFLKEK

ACE2_CAT RNSFVGWSTTDWSPYADQSIKVRISLKSALGDKAYEWNNDNEMYLFRSSVAYAMRQYFSSVK

ACE2_CIVET RNSFVGWSTTDWSPYADQSIKVRISLKSALGDKAYEWNNDNEMYLFRSSVAYAMRQYFSSVK

ACE2_MALAYAN_PANGOLIN KNSFVGWSTTDWSPYADQSIKVRISLKSALGDKAYEWNNDSEMYLFRSSVAYAMRQYFSSVK

ACE2_HUMAN

660 670 680 690 700 710

ACE2_HUMAN NQITLFGEDVVRVANKPRISFNFFVTSKPNVSDIIPRTEVEKAIRMSR...SRINDA

ACE2_RAT NQITVDFEADVVRVSDLKPRVSNFFVTSKPNVSDIIPRSEVEEAIRMSR...GRINDI

ACE2_MOUSE NQITVDFEADVVRVSDLKPRVSNFFVTSKPNVSDIIPRSEVEEAIRMSR...GRINDV

ACE2_Rabbit NQITLFGEDVVRVSDLKPRISFNFFVTSKPNVSDIIPRNEVEEAIRMSR...SRINDI

ACE2_DOG_domestic_ NQITVDFEADVVRVSDLKPRISFNFFVTSKPNVSDIIPRTEVE...EAIR...MYRSRINDV

ACE2_COW NETVDFEADVVRVSDKPKPRISFNFFVTSKPNVSDIIPRTEVENAIRLSR...DRINDV

ACE2_Panda_Giant TQITVDFEADVVRVSDLKPRISFNFFVTSKPNVSDIIPRADV...DAIKNRMSRDRINDA

ACE2-Guinea_pig NQITVDFEADVVRVSDWTHRVSNFFVTSKPNVSDIIPRTEVEEAIRMSR...DRINDA

ACE2_Sheep NETIPDFEADVVRVSDKPKPRISFNFFVTSKPNVSDIIPRTEVENAIRLSR...DRINDA

ACE2_PIG NETIPDFEADVVRVSDLKPRISFNFFVTSKPNVSDIIPRSDVEKAIRMSR...SRINDA

ACE2-Horse NQITLFGEDVVRVSDLKPRISFNFFVTSKPNVSDIIPRTEVEEAIRMSR...SRINDA

ACE2_LEAST-HORSESHOE-BAT NQITLFRDENVRVSDLKPRISFNFFVTSKPNVSDIIPRSEVEGAIR...MSRSRINDA

ACE2_CHINESE-HORSESHOE-BAT HQITLFGADVVRVSDLKPRISFNFFVTSKPNVSDIIPRSEVEGAIR...MSRSRINDA

ACE2_CAT NQITVDFEADVVRVSDLKPRISFNFFVTSKPNVSDIIPRSEVE...EAIR...MSRSRINDA

ACE2_CIVET NQITVDFEADVVRVSDLKPRISFNFFVTSKPNVSDIIPRSEVE...DAIR...MSRSRINDA

ACE2_MALAYAN_PANGOLIN KQITVDFEADVVRVSDLKPRVSNFFVTSKPNVSAVIPRSEVE...EAIR...ISRSRINDA

ACE2_HUMAN

	720	730	740	750	760	770																																																			
ACE2_HUMAN	FR	LND	NS	LE	FL	GI	Q	P	T	L	G	P	P	N	Q	P	P	V	S	I	W	L	I	V	F	G	V	M	G	V	I	V	V	G	I	V	L	I	F	T	G	I	R	D	R	K	K	K	N	K	A						
ACE2_RAT	F	G	L	N	D	N	S	L	E	F	L	G	I	P	T	L	K	P	P	Y	E	P	P	V	T	I	W	L	I	F	G	V	M	G	T	V	V	G	I	V	L	I	F	T	G	I	R	D	R	K	K	N	E	T			
ACE2_MOUSE	F	G	L	N	D	N	S	L	E	F	L	G	I	H	P	T	L	E	P	P	Y	Q	P	P	V	T	I	W	L	I	F	G	V	M	A	L	V	V	G	I	I	L	I	F	T	G	I	K	G	R	K	K	N	E	T		
ACE2_Rabbit	F	R	L	D	D	N	S	L	E	F	V	G	I	O	P	T	L	E	P	P	Y	E	S	P	V	P	I	W	L	V	F	G	V	M	G	M	I	V	I	G	I	V	L	I	F	T	G	I	K	D	R	R	K	Q	A		
ACE2_DOG domestic_	F	R	L	D	D	N	S	L	E	F	L	G	I	O	P	T	L	G	P	P	Y	E	P	P	V	T	I	W	L	V	F	G	V	M	G	V	V	V	G	I	V	L	I	F	S	G	I	R	N	R	R	K	N	D	Q	A	
ACE2_COW	F	Q	L	D	D	N	S	L	E	F	L	G	I	O	P	T	L	G	P	P	Y	E	P	P	V	T	I	W	L	I	F	G	V	M	G	V	V	I	G	I	V	L	I	F	T	G	I	R	N	R	R	K	N	Q	A		
ACE2_Panda_Giant	F	R	L	D	D	N	S	L	E	F	L	G	I	O	P	T	L	G	P	P	Y	Q	P	P	V	T	I	W	L	V	F	G	V	M	G	L	V	V	G	I	I	L	I	F	S	G	I	R	N	R	R	K	N	D	Q	A	
ACE2-Guinea_pig	.	.	S	R	I	N	D	V	F	L	S	G	I	Y	P	T	L	S	P	P	Y	E	P	P	V	T	I	W	L	V	F	G	V	M	G	L	V	V	G	I	V	L	V	I	T	G	I	R	D	R	R	K	K	Q	K		
ACE2_Sheep	F	Q	L	D	D	N	S	L	E	F	L	G	I	O	P	T	L	R	P	P	Y	E	P	P	V	T	I	W	L	I	F	G	V	M	G	V	V	I	G	I	V	L	I	F	T	G	I	R	D	R	R	K	N	Q	A		
ACE2_PIG	F	R	L	D	D	N	S	L	E	F	L	G	I	O	P	T	L	G	P	P	Y	E	P	P	V	T	V	W	L	I	F	G	V	M	G	L	V	V	G	I	V	L	I	F	T	G	I	R	D	R	R	K	K	Q	A		
ACE2-Horse	F	R	L	D	D	N	S	L	E	F	L	G	I	O	P	T	L	G	P	P	Y	E	P	P	V	T	V	W	L	I	F	G	V	M	G	L	V	V	G	I	V	L	I	A	T	G	I	R	G	R	R	K	N	Q	A		
ACE2_LEAST-HORSESHOE-BAT	F	R	L	D	D	N	S	L	E	F	L	G	I	O	P	T	L	G	P	P	Y	Q	P	P	V	T	I	W	L	V	F	G	V	M	A	V	V	V	G	I	V	L	I	T	G	I	R	D	R	R	K	A	D	Q	A		
ACE2_CHINESE-HORSESHOE-BAT	F	R	L	D	D	N	S	L	E	F	L	G	I	O	P	T	L	G	P	P	Y	Q	P	P	V	T	I	W	L	V	F	G	V	M	A	V	V	V	G	I	V	L	I	T	G	I	R	D	R	R	K	T	D	Q	A		
ACE2_CAT	F	R	L	D	D	N	S	L	E	F	L	G	I	O	P	T	L	S	P	P	Y	Q	P	P	V	T	I	W	L	V	F	G	V	M	G	V	V	V	G	I	V	L	I	V	S	G	I	R	N	R	R	K	N	N	Q	A	
ACE2_CIVET	F	R	L	D	D	N	S	L	E	F	L	G	I	O	P	T	L	S	P	P	Y	Q	P	P	V	T	I	W	L	V	F	G	V	M	G	A	I	V	V	G	I	V	L	I	V	S	G	I	R	N	R	R	K	N	D	Q	A
ACE2_MALAYAN_PANGOLIN	F	R	L	D	D	N	S	L	E	F	L	G	I	O	P	T	L	Q	P	P	Y	Q	P	P	V	T	I	W	L	V	F	G	V	M	G	V	V	V	G	I	V	L	I	F	T	G	I	R	D	R	R	K	D	Q	A		

ACE2_HUMAN

	780	790	800																												
ACE2_HUMAN	R	S	G	E	N	P	Y	A	S	I	D	I	S	K	G	E	N	N	P	G	F	O	N	T	D	D	V	O	T	S	F
ACE2_RAT	K	R	E	N	P	Y	D	S	M	D	I	G	K	G	E	S	N	A	G	F	O	N	S	D	D	A	O	T	S	F	
ACE2_MOUSE	K	R	E	N	P	Y	D	S	M	D	I	G	K	G	E	S	N	A	G	F	O	N	S	D	D	A	O	T	S	F	
ACE2_Rabbit	K	R	E	N	P	Y	G	F	V	D	M	S	K	G	E	N	N	S	G	F	O	N	S	D	D	I	O	T	S	F	
ACE2_DOG domestic_	R	G	E	N	P	Y	A	S	V	D	L	S	K	G	E	N	N	P	G	F	O	S	G	D	D	V	O	T	S	F	
ACE2_COW	S	S	E	N	P	Y	G	S	V	D	L	N	K	G	E	N	N	S	G	F	O	N	I	D	D	V	O	T	S	L	
ACE2_Panda_Giant	R	S	E	N	P	Y	A	S	V	D	L	S	K	G	E	N	N	P	G	F	O	N	A	D	D	V	O	T	S	F	
ACE2-Guinea_pig	Q	R	E	N	P	Y	S	S	V	D	I	G	K	E	N	N	T	A	F	O	N	S	E	D	N	O	T	S	F		
ACE2_Sheep	S	S	E	N	P	Y	G	S	V	D	L	N	K	G	E	N	N	S	G	F	O	N	T	D	D	V	O	T	S	L	
ACE2_PIG	S	S	E	N	P	Y	G	S	M	D	L	S	K	G	E	S	N	S	G	F	O	N	G	D	D	I	O	T	S	F	
ACE2-Horse	R	S	E	N	P	Y	A	S	V	D	L	S	K	G	E	N	N	P	G	F	O	N	G	D	D	V	O	T	S	F	
ACE2_LEAST-HORSESHOE-BAT	R	S	E	N	P	Y	P	S	V	D	L	S	K	G	E	N	N	P	G	F	O	N	G	D	D	V	O	T	S	F	
ACE2_CHINESE-HORSESHOE-BAT	R	S	E	N	P	Y	S	S	V	D	L	S	K	G	E	N	N	P	G	F	O	N	G	D	D	V	O	T	S	F	
ACE2_CAT	R	S	E	N	P	Y	A	S	V	D	L	S	K	G	E	N	N	P	G	F	O	H	A	D	D	V	O	T	S	F	
ACE2_CIVET	G	S	E	N	P	Y	A	S	V	D	L	N	K	G	E	N	N	P	G	F	O	H	A	D	D	V	O	T	S	F	
ACE2_MALAYAN_PANGOLIN	R	S	E	N	P	Y	A	S	V	D	L	S	K	G	E	N	N	P	G	F	O	N	V	D	D	V	O	T	S	F	