

## **Predicting mammalian species at risk of being infected by SARS-CoV-2 from an ACE2 perspective**

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Order	Family	Species	ACE2 binding hotspots similarities with HACE2																		Total Similarity	Total Similarity
Primates	Aotidae	<i>Aotus nancymae</i>	519	Q24	D30	K31	H34	E35	E37	D38	H41	Q42	L79	T82	Y83	H83	K353	R393	12/15	5-9 less 6 to 7 8 to 9 10 to 11 12 to 13 14 to 15		
		<i>Sapajus apella</i>	519	Q24	D30	K31	H34	E35	E37	D38	H41	Q42	L79	T82	Y83	H83	K353	R393	12/15			
		<i>Macaca fascicularis</i>	519	Q24	D30	K31	H34	E35	E37	D38	H41	Q42	L79	M82	H83	K353	R393	15/15				
	Cercopithecoidea	<i>Macaca mulatta</i>	519	Q24	D30	K31	H34	E35	E37	D38	H41	Q42	L79	M82	H83	K353	R393	15/15				
		<i>Macaca nemestrina</i>	519	Q24	D30	K31	H34	E35	E37	D38	H41	Q42	L79	M82	H83	K353	R393	15/15				
		<i>Mandrillus leucophaeus</i>	519	Q24	D30	K31	H34	E35	E37	D38	H41	Q42	L79	M82	H83	K353	R393	15/15				
	Hominidae	<i>Pan paniscus</i>	519	Q24	D30	K31	H34	E35	E37	D38	H41	Q42	L79	M82	H83	K353	R393	15/15				
		<i>Pan troglodytes</i>	519	Q24	D30	K31	H34	E35	E37	D38	H41	Q42	L79	M82	H83	K353	R393	15/15				
		<i>Pongo abelii</i>	519	Q24	D30	K31	H34	E35	E37	D38	H41	Q42	L79	M82	H83	K353	R393	15/15				
		<i>Hylobates moloch</i>	519	Q24	D30	K31	H34	E35	E37	D38	H41	Q42	L79	M82	H83	K353	R393	15/15				
		<i>Nasucas leucones</i>	519	Q24	D30	K31	H34	E35	E37	D38	H41	Q42	L79	M82	H83	K353	R393	15/15				
		<i>Propithecus coquereli</i>	540	Q45	D51	K52	H55	E56	F58	D59	Y62	O63	L100	T101	Y104	K124	R144	14/15				
		<i>Carlito synticha</i>	519	Q24	D30	K31	Q34	E35	E37	D38	H41	Q42	L79	S83	H83	N353	R393	10/15				

Order	Family	Species	ACE2 binding hotspots similarities with HACE2																		Total Similarity	Total Similarity
Balaenopteridae	<i>Balaenoptera acutorostrata</i>	519	Q24	D30	K31	H34	E35	E37	D38	H41	Q42	L79	T82	Y83	H83	K352	R392	11/15	5-9 less 6 to 7 8 to 9 10 to 11 12 to 13 14 to 15			
		<i>Bos indicus</i>	519	Q24	E30	K31	H34	E35	E37	D38	H41	Q42	M79	T82	Y83	K352	R392	12/15				
		<i>Bos mutus</i>	519	Q24	E30	K31	H34	E35	E37	D38	H41	Q42	M79	T82	Y83	K352	R392	12/15				
	Bovidae	<i>Bos taurus</i>	519	Q24	E30	K31	H34	E35	E37	D38	H41	Q42	M79	T82	Y83	K352	R392	12/15				
		<i>Bubalus bubalis</i>	518	Q23	E29	K30	H33	E34	E36	D37	H40	Q41	M78	T81	Y82	K351	R391	12/15				
		<i>Capra hircus</i>	519	Q24	E30	K31	H34	E35	E37	D38	H41	Q42	M79	T82	Y83	K352	R392	12/15				
	Camelidae	<i>Ovis aries</i>	519	Q24	E30	K31	H34	E35	E37	D38	H41	Q42	M79	T82	Y83	K352	R392	12/15				
		<i>Camelus ferus</i>	519	L24	E30	E31	H34	E35	E37	D38	H41	Q42	L79	T82	Y83	K353	R393	10/15				
		<i>Vicugna pacos</i>	519	L24	E30	E31	H34	E35	E37	D38	H41	Q42	L79	T82	Y83	K353	R393	10/15				

Order	Family	Species	ACE2 binding hotspots similarities with HACE2																		Total Similarity	Total Similarity
Artiodactyla	Delphinidae	<i>Globicephala melas</i>	519	R24	D30	K31	R34	E35	E37	D38	H41	Q42	L79	T82	Y83	K352	R392	10/15	5-9 less 6 to 7 8 to 9 10 to 11 12 to 13 14 to 15			
		<i>Lagenorhynchus obliquidens</i>	519	R24	D30	K31	R34	E35	E37	D38	H41	Q42	L79	T82	Y83	K352	R392	10/15				
		<i>Orcinus orca</i>	519	R24	D30	K31	R34	E35	E37	D38	H41	Q42	L79	T82	Y83	K352	R392	10/15				
	Lipotidae	<i>Tursiops truncatus</i>	519	R24	D30	K31	R34	E35	E37	D38	H41	Q42	L79	T82	Y83	K352	R392	10/15				
		<i>Lipotes vexillifer</i>	519	R24	D30	K31	R34	E35	E37	D38	H41	Q42	L79	T82	R83	K352	R392	10/15				
		<i>Delphinapterus leucas</i>	519	Q24	D30	K31	H34	E35	E37	D38	H41	Q42	L79	T82	Y83	K352	R392	12/15				
	Monodontidae	<i>Monodon monoceros</i>	519	Q24	D30	K31	H34	E35	E37	D38	H41	Q42	L79	T82	Y83	K352	R392	12/15				
		<i>Neophocaena asiatica</i>	519	Q24	D30	K31	H34	E35	E37	D38	H41	Q42	L79	T82	Y83	K352	R392	12/15				
		<i>Phocoena sinus</i>	519	Q24	D30	K31	H34	E35	E37	D38	H41	Q42	L79	T82	Y83	K352	R392	12/15				
	Phocoenidae	<i>Phocoena cotopsis</i>	519	Q24	D30	K31	H34	E35	E37	D38	H41	Q42	L79	T82	Y83	K352	R392	12/15				
		<i>Physeter cotodon</i>	519	Q24	E30	K31	H34	E35	E37	D38	H41	Q42	L79	T82	Y83	K352	R392	12/15				
		<i>Sus scrofa</i>	519	L24	E30	K31	L34	E35	E37	D38	H41	Q42	L79	T82	Y83	K353	R393	10/15				

Order	Family	Species	ACE2 binding hotspots similarities with HACE2																		Total Similarity	Total Similarity
Hippodridae	<i>Hippodamia armiger</i>	519	L24	D30	K31	T34	E35	E37	D38	H41	L42	R29	D83	Y83	K353	R393	9/15	5-9 less 6 to 7 8 to 9 10 to 11 12 to 13 14 to 15				
		<i>Mniopteris natalensis</i>	519	K24	E30	G31	S34	Q35	E37	D38	H42	Q42	L79	Y82	H83	K353	R393		7/15			
		<i>Phyllotomus discolor</i>	519	Q24	E30	N31	H34	E35	E37	D38	H41	Q42	L79	M82	Y83	K350	R390		10/15			
	Pteropodidae	<i>Pteropus alecto</i>	519	L24	E30	K31	T34	E35	E37	D38	H41	Q42	L79	M82	H83	K353	R393		10/15			
		<i>Pteropus vampyrus</i>	519	L24	E30	K31	T34	E35	E37	D38	H41	Q42	L79	M82	H83	K352	R392		10/15			
		<i>Rousettus aegyptiacus</i>	519	L24	E30	K31	T34	E35	E37	D38	H41	Q42	L79	T82	Y83	K353	R393		11/15			
	Chiroptera	<i>Rousettus eschenauii</i>	519	L24	E30	K31	T34	E35	E37	D38	H41	Q42	L79	T82	Y83	K353	R393		11/15			
		<i>Rhinolophus ferrumequinum</i>	519	L24	D30	D31	S34	E35	E37	N38	H41	Q42	L79	N82	H83	K353	R393		8/15			
		<i>Rhinolophus macrotis</i>	519	L24	D30	K31	S34	K35	E37	D38	H41	E42	L79	N82	H83	K353	R393		10/15			

Order	Family	Species	ACE2 binding hotspots similarities with HACE2																		Total Similarity	Total Similarity
Canidae	<i>Canis lupus dingii</i>	519	L23	E29	K30	Y33	E34	E36	E37	H40	Q41	L78	T83	Y82	K352	R392	10/15	5-9 less 6 to 7 8 to 9 10 to 11 12 to 13 14 to 15				
		<i>Canis lupus familiaris</i>	519	L23	E29	K30	Y33	E34	E36	E37	H40	Q41	L78	T83	Y82	K352	R392		10/15			
		<i>Nyctereutes procyonoides</i>	519	L23	E29	K30	Y33	E34	E36	E37	H40	Q41	L78	T83	Y82	K352	R392		10/15			
	Felidae	<i>Vulpes vulpes</i>	519	L23	E29	K30	Y33	E34	E36	E37	H40	Q41	L78	T83	Y82	K352	R392		10/15			
		<i>Felis catus</i>	519	L24	E30	K31	H34	E35	E37	D38	H41	Q42	L79	T82	Y83	K353	R393		11/15			
		<i>Lynx canadensis</i>	519	L24	E30	K31	H34	E35	E37	D38	H41	Q42	L79	T82	Y83	K353	R393		11/15			
	Herpestidae	<i>Panthera tigris altaica</i>	511	L16	F22	K23	H26	F27	L29	Q30	Y33	Q34	L71	T74	F75	K436	R485		11/15			
		<i>Puma concolor</i>	519	L24	E30	K31	H34	E35	E37	D38	H41	Q42	L79	T82	Y83	K353	R393		11/15			
		<i>Suricata suricatta</i>	519	L24	E30	Q31	H34	E35	Q37	D38	H41	L42	R79	A82	Y83	K353	R393		7/15			

Order	Family	Species	ACE2 binding hotspots similarities with HACE2																		Total Similarity	Total Similarity
Canidae	<i>Canis lupus dingii</i>	519	L23	E29	K30	Y33	E34	E36	E37	H40	Q41	L78	T83	Y82	K352	R392	10/15	5-9 less 6 to 7 8 to 9 10 to 11 12 to 13 14 to 15				
		<i>Canis lupus familiaris</i>	519	L23	E29	K30	Y33	E34	E36	E37	H40	Q41	L78	T83	Y82	K352	R392		10/15			
		<i>Nyctereutes procyonoides</i>	519	L23	E29	K30	Y33	E34	E36	E37	H40	Q41	L78	T83	Y82	K352	R392		10/15			
	Felidae	<i>Vulpes vulpes</i>	519	L23	E29	K30	Y33	E34	E36	E37	H40	Q41	L78	T83	Y82	K352	R392		10/15			
		<i>Felis catus</i>	519	L24	E30	K31	H34	E35	E37	D38	H41	Q42	L79	T82	Y83	K353	R393		11/15			
		<i>Lynx canadensis</i>	519	L24	E30	K31	H34	E35	E37	D38	H41	Q42	L79	T82	Y83	K353	R393		11/15			



Order	Family	Species	ACE2 binding hotspots similarities with hACE2														Total Similarity	Total similarity
Afrosoricida	Chrysochloridae	<i>Chrysochloris asiatica</i>	N30	H40	K81	F82	S83	K347	D348	D349	F350	R351	4	0 to 1 2 to 3 4 to 5 6 to 7 8 to 9 10				
		<i>Echinops tefsi</i>	T31	Y41	K82	F83	S84	L348	D349	D350	F351	R352	4					
	Balaenopteridae	<i>Balaenoptera acutorostrata</i>	K31	Y41	T82	Y83	P84	K352	G353	D354	F355	R356	9					
		<i>Bos indicus</i>	K31	Y41	T82	Y83	S84	K352	G353	D354	F355	R356	8					
	Bovidae	<i>Bos mutus</i>	K31	Y41	T82	Y83	S84	K352	G353	D354	F355	R356	8					
		<i>Bos taurus</i>	K31	Y41	T82	Y83	S84	K352	G353	D354	F355	R356	8					
		<i>Bubalis bubalis</i>	K30	Y40	T81	Y82	S83	K351	G352	D353	F354	R355	8					
	Camelidae	<i>Camelus bactrianus</i>	K31	Y41	T82	Y83	S84	K352	G353	D354	F355	R356	8					
		<i>Ovis aries</i>	K31	Y41	T82	Y83	S84	K352	G353	D354	F355	R356	8					
		<i>Camelus ferus</i>	E31	Y41	T82	Y83	P84	K353	G354	D355	F356	R357	8					
	Artiodactyla	Camelidae	<i>Vicugna pacos</i>	E31	Y41	I82	Y83	P84	K353	G354	D355	F356	R357		8			
			<i>Globicephala melas</i>	K31	Y41	T82	Y83	P84	K352	G353	D354	F355	R356		9			
			<i>Loganorhynchus obliquoides</i>	K31	Y41	T82	Y83	P84	K352	G353	D354	F355	R356		9			
		Delphinidae	<i>Orcinus orca</i>	K31	Y41	T82	Y83	P84	K352	G353	D354	F355	R356		9			
			<i>Tursiops truncatus</i>	K31	Y41	T82	Y83	P84	K352	G353	D354	F355	R356		9			
	Lipotidae	<i>Lipotes vexillifer</i>	K31	Y41	T82	F83	P84	K352	G353	D354	F355	R356	8					
		<i>Delphinapterus leucas</i>	K31	Y41	T82	Y83	P84	K352	G353	D354	F355	R356	9					
	Monodontidae	<i>Monodon monoceros</i>	K31	Y41	T82	Y83	P84	K352	G353	D354	F355	R356	9					
<i>Neophocaena asiaeorientalis</i>		K31	Y41	T82	Y83	S84	K352	G353	D354	F355	R356	8						
Phocoenidae	<i>Phocoena sinus</i>	K31	Y41	T82	Y83	S84	K352	G353	D354	F355	R356	8						
	<i>Physeter catodon</i>	K31	Y41	T82	Y83	P84	K352	G353	D354	F355	R356	9						
Suidae	<i>Sus scrofa</i>	K31	Y41	T82	Y83	P84	K353	G354	D355	F356	R357	9						
	<i>Canis lupus dingo</i>	K30	Y40	T81	Y82	P83	K352	G353	D354	F355	R356	9						
Caniidae	<i>Canis lupus familiaris</i>	K30	Y40	T81	Y82	P83	K352	G353	D354	F355	R356	9						
	<i>Nyctereutes procyonoides</i>	K30	Y40	T81	Y82	P83	R352	G353	D354	F355	R356	8						
	<i>Vulpes vulpes</i>	K30	Y40	T81	Y82	P83	K352	G353	D354	F355	R356	9						
	<i>Felis catus</i>	K31	Y41	T82	Y83	P84	K353	G354	D355	F356	R357	9						
	<i>Lynx canadensis</i>	K31	Y41	T82	Y83	P84	K353	G354	D355	F356	R357	9						
Felidae	<i>Panthera tigris altaica</i>	K23	V33	T74	W75	P76	K345	G346	D347	F348	R349	9						
	<i>Panthera onca</i>	K31	Y41	T82	Y83	P84	K353	G354	D355	F356	R357	9						
Herpestidae	<i>Suroctata suroictata</i>	Q31	Y41	A82	Y83	P84	K353	G354	D355	F356	R357	8						
	<i>Lontra canadensis</i>	K31	Y41	T82	Y83	P84	K353	R354	D355	F356	R357	8						
Mustelidae	<i>Enhydra lutris kenyoni</i>	K31	Y41	T82	Y83	P84	K353	R354	D355	F356	R357	8						
	<i>Mustela erminea</i>	K31	Y41	T82	Y83	P84	K353	R354	D355	F356	R357	8						
	<i>Mustela putorius furo</i>	K31	Y41	T82	Y83	P84	K353	R354	D355	F356	R357	8						
	<i>Odobenus rosmarus</i>	K31	Y41	T82	Y83	P84	K353	R354	D355	F356	R357	8						
	<i>Urocyon vulpinus</i>	K31	Y41	T82	Y83	P84	K353	R354	D355	F356	R357	8						
Otaridae	<i>Eumetopias jubatus</i>	K31	Y41	T82	Y83	P84	K353	R354	D355	F356	R357	8						
	<i>Zalophus californianus</i>	K31	Y41	T82	Y83	P84	K353	R354	D355	F356	R357	8						
Phocidae	<i>Neomonachus schauinslandi</i>	K31	Y41	T82	Y83	P84	K353	R354	D355	F356	R357	8						
	<i>Phoca vitulina</i>	K31	Y41	T82	Y83	P84	K353	R354	D355	F356	R357	8						
Procyonidae	<i>Procyon lotor</i>	N31	Y41	T82	Y83	P84	K353	G354	D355	F356	R357	8						
	<i>Ailuropad melanoleuca</i>	K31	Y41	T82	Y83	P84	K353	G354	D355	F356	R357	9						
Ursidae	<i>Ursus arctos</i>	K31	Y41	T82	Y83	P84	K353	G354	D355	F356	R357	9						
	<i>Ursus montanus</i>	K15	V26	T77	W87	P89	K338	G339	D340	F341	R342	9						
Viverridae	<i>Paguma larvata</i>	T31	Y41	T82	Y83	P84	K353	G354	D355	F356	R357	8						
	<i>Hipposideros armiger</i>	K31	H41	D82	Y83	R84	K353	G354	D355	F356	R357	7						
	<i>Miniopterus natalensis</i>	G31	F41	I82	Y83	P84	K353	G354	D355	F356	R357	7						
	<i>Phyllotomus discolor</i>	N31	Y41	N82	Y83	P84	K350	K351	D352	F353	R354	7						
	<i>Pteropus alecto</i>	K31	Y41	A82	Y83	Q84	K353	G354	D355	F356	R357	8						
Pteropodidae	<i>Pteropus vampyrus</i>	K31	Y41	A82	Y83	Q84	K352	G353	D354	F355	R356	8						
	<i>Rousettus aegyptiacus</i>	K31	Y41	T82	Y83	Q84	K353	G354	D355	F356	R357	8						
	<i>Rousettus leschenaulti</i>	K31	Y41	T82	Y83	Q84	K353	G354	D355	F356	R357	8						
Chiroptera	<i>Rhinolophus ferremiquemum</i>	D31	H41	N82	F83	S84	K353	G354	D355	F356	R357	5						
	<i>Rhinolophus macrotis</i>	N31	Y41	N82	Y83	P84	K353	G354	D355	F356	R357	9						
	<i>Rhinolophus pusillus</i>	D31	Y41	N82	Y83	P84	K353	G354	D355	F356	R357	8						
	<i>Rhinolophus sinicus</i>	E31	Y41	N82	Y83	P84	K353	G354	D355	F356	R357	8						
Vespertilionidae	<i>Eptesicus fuscus</i>	N31	H41	T82	Y83	P84	K352	N353	D354	F355	R356	6						
	<i>Myotis brandtii</i>	N31	H41	T82	Y83	P84	K352	G353	D354	F355	R356	7						
	<i>Myotis davidii</i>	N11	H41	T82	Y83	P84	K352	G353	D354	F355	R356	7						
Cingulata	<i>Myotis lucifugus</i>	N31	H41	T82	Y83	P84	K352	G353	D354	F355	R356	7						
	<i>Pipistrellus abramus</i>	K31	H41	G82	F83	P84	K352	N353	D354	F355	R356	6						
	<i>Dasylops novemcinctus</i>	T30	H40	N81	F82	S83	K352	G353	D354	F355	R356	5						
Dasyuriformia	<i>Dasyuridae</i>																	
	<i>Sarcophilus harrisi</i>	N31	Y41	A82	Y83	P84	K353	G354	D355	F356	R357	8						
Diprotodontia	<i>Phascolarctidae</i>																	
	<i>Phascolarctidae cinereus</i>	T31	Y41	T82	F83	P84	K353	G354	D355	F356	R357	7						
Eulipotyphla	<i>Vombatidae</i>																	
	<i>Vombatus ursinus</i>	T33	Y43	T84	F85	P86	K355	G356	D357	F358	R359	7						
Lagomorpha	<i>Ericaceae europaeus</i>	T31	Y41	N82	Y83	D84	N353	G354	D355	F356	R357	7						
	<i>Eriocapidae</i>																	
Macroscelididae	<i>Candylura cristata</i>	D31	Y41	N82	F83	Q84	K348	G349	D350	F351	R352	6						
	<i>Sorex araneus</i>	N30	Y40	T81	F82	P83	K351	N352	D353	Y354	R355	5						
	<i>Ochotonidae</i>																	
	<i>Oryzopsis princeps</i>	K41	H45	V46	T87	P88	K346	D387	G388	F389	R390	6						
	<i>Oryzotops cycloculus</i>	K31	Y41	T82	Y83	P84	K353	R354	D355	F356	R357	8						
Monotremata	Macroscelididae	<i>Elephantulus edwardii</i>	Q31	Y41	N82	F83	P84	K348	G349	D350	F351	R352	7					
		<i>Ornithorhynchus anatinus</i>	D30	Y40	K81	F82	N83	K352	N353	D354	F355	R356	5					
	Equidae	<i>Equus asinus</i>	K31	H41	T82	Y83	P84	K331	G332	D333	F334	R335	8					
		<i>Equus caballus</i>	K31	H41	T82	Y83	P84	K353	G354	D355	F356	R357	8					
	Perissodactyla	<i>Equus przewalskii</i>	K31	H41	T82	Y83	P84	K353	G354	D355	F356	R357	8					
		<i>Ceratotherium simum</i>	K31	Y41	T82	Y83	P84	K353	G354	D355	F356	R357	9					
	Pholidota	Manidae	<i>Manis javanica</i>	K31	Y41	N82	Y83	Q84	K353	H354	D355	F356	R357	7				
			<i>Aotus nancymae</i>	K31	H41	T82	Y83	P84	K353	D354	D355	F356	R357	6				
		Cebidae	<i>Sapajus apella</i>	K31	H41	T82	Y83	P84	K353	Q354	D355	F356	R357	7				
			<i>Nasua fuscescens</i>	K31	Y41	M82	Y83	P84	K353	G354	D355	F356	R357	10				
		Cercopithecoidea	<i>Cercopithecus atys</i>	K31	Y41	M82	Y83	P84	K353	G354	D355	F356	R357	10				
			<i>Cercopithecus aethiops</i>	K31	Y41	M82	Y83	P84	K353	G354	D355	F356	R357	10				
			<i>Chlorocebus sabaeus</i>	K31	Y41	M82	Y83	P84	K353	G354	D355	F356	R357	10				
			<i>Macaca mulatta</i>	K31	Y41	M82	Y83	P84	K353	G354	D355	F356	R357	10				
			<i>Macaca nemestrina</i>	K31	Y41	M82	Y83	P84	K353	G354	D355	F356	R357	10				
			<i>Mandrillus leucophaeus</i>	K31	Y41	M82	Y83	P84	K353	G354	D355	F356	R357	10				
		Primates	<i>Papias leucon</i>	K31	M82	Y83	P84	K353	G354	D355	F356	R357	10					
			<i>Ptilocobus tephrosceles</i>	K31	Y41	M82	Y83	P84	K353	G354	D355	F356	R357	10				
<i>Theropithecus gazella</i>	K31		Y41	M82	Y83	P84	K353	G354	D355	F356	R357	10						
<i>Rhinopithecus roxellana</i>	K31		Y41	M82	Y83	P84	K353	G354	D355	F356	R357	10						
Cherogaleidae	<i>Trachypithecus francoisi</i>	K31	Y41	M82	Y83	P84	K353	G354	D355	F356	R357	10						
	<i>Microcebus murinus</i>	N57	H67	T108	V109	P110	K379	G380	D381	F382	R383	7						
	<i>Galagoides</i>																	
	<i>Otolemur garnettii</i>	N31	H41	T82	Y83	P84	K353	D354	D355	F356	R357	6						
	<i>Calithrix jacchus</i>	K31	Y41	T82	Y83	P84	K353	D354	D355	F356	R357	7						
	Cebidae	<i>Cebus fuscus</i>	K31	H41	T82	Y83	P84	K353	D354	D355	F356	R357	7					
		<i>Homo sapiens</i> </																

## SUPPLEMENTARY FIGURE LEGENDS

Supplementary Fig. S1. Comparisons of *ACE2* genes in 132 mammalian species at 15 key human *ACE2* sites involved in SARS-CoV-2 S protein binding. These species belong to the orders a) Primates, b) Artiodactyla, c) Chiroptera, d) Canivora, and e) Rodentia, and in panel f) displays species belonging to 14 other orders. All *ACE2* genes are aligned using MAFFT with option G-INS-i. Highlighted blue and red are matching and mis-matching amino acid residues, respectively, between mammalian *ACE2* and human *ACE2*. Total similarity designates the total number of matching amino acid residues with respect to human *ACE2*. The total similarity score for mammalian *ACE2* in blue highlights perfect site similarities (14 to 15 matching sites), in green highlights high similarity (12 to 13 matching sites), in light green highlights medium-high similarity (10 to 11 matching sites), in yellow highlights medium similarity (8 to 9 matching sites), in orange highlights medium-low similarity (6 to 7 matching sites), and in red highlights low similarity (5 or less matching sites).

Supplementary Fig. S2. Phylogenetic reconstruction based on 132 MAFFT G-INS-i aligned mammalian *ACE2* amino acid sequences. The tree is built with the maximum-likelihood-based PHYML approach, with best substitution model = JTT + G + I + F, Bootstrap = 500, and Outgroup = *Ornithorhynchus anatinus*. Mammalian species names are colored based on total similarity at *ACE2* against human *ACE2*: in blue highlights perfect site similarity (14 to 15 matching sites), in green highlights high similarity (12 to 13 matching sites), in light green highlights medium-high similarity (10 to 11 matching sites), in yellow highlights medium similarity (8 to 9 matching sites), in orange highlights medium-low similarity (6 to 7 matching sites), and in red highlights low similarity (5 or less matching sites).

Supplementary Fig. S3. Comparisons of *ACE2* genes in 132 mammalian species at 10 key human *ACE2* sites involved in SARS-CoV S protein binding. These species belong to the orders Primates, Artiodactyla, Chiroptera, Canivora, Rodentia, and 14 other orders. All *ACE2* genes are aligned using MAFFT with option G-INS-i. Highlighted blue and red are matching and mis-matching amino acid residues, respectively, between mammalian *ACE2* and human *ACE2*. Total similarity designates the total number of matching amino acid residues with respect to human *ACE2*. The total similarity score for mammalian *ACE2* in blue highlights perfect site similarities (10 matching sites), in green highlights high similarity (8 to 9 matching sites), in light green highlights medium-high similarity (6 to 7 matching sites), in yellow highlights medium similarity (4 to 5 matching sites), in orange highlights medium-low similarity (2 to 3 matching sites), and in red highlights low similarity (1 or less matching sites).