NC\_034971.1 | Kobuvirus | SMCD-59 | Canis lupus familiaris | China | 2015 | NC\_015936.1 | Kobuvirus | Peromyscus crinitus | USA | 2010 | NC\_001918.1 | Kobuvirus | A846/88 | Homo sapiens | Japan | 1998 | OQ818322 | Kobuvirus | KEL318 | Eidolon dupreanum | Madagascar | 2019 | OP287812.1 | Madagascar bat kobuvirus | Eidolon dupreanum | Madagascar | 2018 | NC\_027054.1 | Kobuvirus | JS-02a-CHN/2014/China | Sus scrofa | China | 2014 | NC\_016769.1 | Kobuvirus | SH-W-CHN/2010/China | Sus scrofa | China | 2010 | NC\_011829 1 | Kobuvirus | Sus scrofa | Hungary | 2007 B NC\_016769.1 NC\_011829.1 NC\_023422.1 NC\_004421.1 NC\_011829.1 | Kobuvirus | Sus scrofa | Hungary | 2007
NC\_023422.1 | Kobuvirus | 12Q108 | Capra hircus | South Korea | 2012
NC\_02421.1 | Kobuvirus | Bos taurus | Japan | 2003
NC\_027918.1 | Kobuvirus | Bos taurus | Japan | 2015
NC\_027919.1 | Kobuvirus | Bos taurus | Japan | 2014 Salivirus/Sakobuvirus -■NC\_038317.1 | Kunsagivirus | Coracias garrulus | Hungary | 2011 Passerivirus/Sicinvirus Gallivirus/Megrivirus Megrivirus/Parechovirus Oscivirus/Livupivirus/Rafivirus
Rosavirus
Harkavirus/Dicipivirus NC\_055108.1 | Poecivirus | Poecile atricapillus | USA | 2002 Apthovirus Bopivirus/Erbovirus NC\_040611.1 | Dicipivirus | Erinaceus roumanicus | Hungary | 2015 Cardiovirus/Senecavirus Cardiovirus Megrivirus/Ailurivirus NC\_034381.1 | Mischivirus | Miniopterus schreibersii | China | 2010 NC\_043072.1 | Mischivirus | Miniopterus schreibersii | Hungary | 2013 NC\_026470.1 | Mischivirus | PREDICT-06105 | Macronycteris gigas | Democratic Republic of the Congc OQ818316 | Mischivirus | Pteropus rufus | Madagascar | 2018 Cosavirus Mosavirus Malagasivirus/Tottorivirus/Hunnivirus

\_\_\_\_OQ818324 | Teschovirus | MIZ205 | Rousettus madagascariensis | Madagascar | 2018

\_\_\_OQ818323 | Teschovirus | MIZ190 | Rousettus madagascariensis | Madagascar | 2018

\_\_\_\_ONC\_003985.1 | Teschovirus | F65 | Sus scrofa | United Kingdom | 1999

\_\_\_\_ONC\_039210.1 | Aphthovirus | o6pirbright iso58 | Homo sapiens | United Kingdom | 2019 Ampivirus Avisivirus OQ818317 | Kunsagivirus | Eidolon dupreanum | Madagascar | 2018 NC\_033818.1 | Kunsagivirus | Eidolon helvum | Cameroon | 2013

NC\_034206.1 | Kunsagivirus | baboon/M27-KuV/1986/TAN | Papio cynocephalus | Tanzania | 1986 Genus —■NC\_024766.1 | Avisivirus | 44C | Gallus gallus | Hong Kong | 2008 ■NC\_025432.1 | Orivirus | Gallus gallus | Hungary | 2013 Sapovirus Limnipivirus/Potamipivirus

Parechovirus/Shanbavirus | BtMf-PicoV-1/SAX2011 | Miniopterus fuliginosus | China | 2011

NC\_038961.1 | Shanbavirus | BtMf-PicoV-1/SAX2011 | Miniopterus fuliginosus | China | 2011

NC\_038961.1 | Shanbavirus | Anseriformes | USA | 2006

NC\_039004.1 | Megrivirus | KGI-Bel-P5/2015 | Pygoscelis adeliae | Antarctica | 2015

NC\_039891.1 | Aquamavirus | HO.02.21 | Pusa hispida | Canada | 2008

NC\_025474.1 | Crohivirus | Crocidura hirta | Zambia | 2012

NC\_03843.1 | Unclassified picornavirus | Chiroptera | USA | 2016

NC\_03843.1 | Crohivirus | Eidolon helvum | Cameroon | 2013

OQ818318 | Teschovirus | KEL164 | Eidolon dupreanum | Madagascar | 2018

NC\_03820.1 | Sapelovirus | KEL233 | Eidolon dupreanum | Madagascar | 2018

NC\_025890.1 | Torchivirus | Testudo hermanni | Germany | 2004

NC\_038311.1 | Enterovirus | Homo sapiens | USA | 2009

NC\_03990.1 | Tremovirus | Gallus gallus | USA | 1999

NC\_015626.1 | Unclassified picornavirus | Columbidae | Norway | 2003

NC\_055156.1 | Rabovirus | RtMp-PicoV/YN2014 | Rodentia | China | 2017

NC\_040605.1 | Sapelovirus | Marmota himalayana | China | 2013 Limnipivirus/Potamipivirus Vesivirus Lagovirus Norovirus Calicivirus Salovirus Bavovirus Minovirus Recovirus Nacovirus Nebovirus Saplivirus Coronavirus NC\_055156.1 NC\_040605.1 NC\_055160.1 | Sapelovirus | Marmota himalayana | China | 2013 | Rabovirus | MPV/NYC/2014/M005/0074 | Mus musculus | USA | 2014 NC\_055160.1 | Rabovirus | MPV/NYC/2014/M005/0074 | Mus musculus | USA | 2014 NC\_015934.1 | Unclassified picornavirus | Rhinolophus sinicus | Hong Kong | 2008 NC\_016156.1 | Unclassified picornavirus | Felis catus | Hong Kong | 2007 OQ818328 | Roupivirus | MIZ240 | Rousettus madagascariensis | Madagascar | 2018 OQ818325 | Roupivirus | MIZ214 | Rousettus madagascariensis | Madagascar | 2018 NC\_015940.1 | Unclassified picornavirus | Miniopterus pusillus | Hong Kong | 2008 NC\_035779.1 | Unclassified picornavirus | Falco vespertinus | Hungary | 2014 NC\_015941.1 | Unclassified picornavirus | Miniopterus magnater | Hong Kong | 2005 OQ818329 | Sapelovirus | Rousettus madagascariensis | Madagascar | 2018 NC\_0818329 | Sapelovirus | Rousettus madagascariensis | Madagascar | 2019 OQ818329 | Sapelovirus | Rousettus madagascariensis | Madagascar | 2018 | OQ818321 | Sapelovirus | KEL272 | Eidolon dupreanum | Madagascar | 2019 | NC\_003987.1 | Sapelovirus | Sus scrofa | Germany | 2002 | NC\_016403.1 | Unclassified picornavirus | Coturnix coturnix | Hungary | 2010 | NC\_006553.1 | Anativirus | TW90A | Anseriformes | Taiwan | 2007 | NC\_028366.1 | Hepatovirus | M32Eidhel2010 | Eidolon helvum | Ghana | 2010 | OQ818337 | Hepatovirus | Eidolon dupreanum | Madagascar | 2018 | NC\_028981.1 | Hepatovirus | TN1 | Tupaia chinensis | China | 2012 | NC\_028365.1 | Hepatovirus | Igel8Erieur2014 | Erinaceus europaeus | Germany | 2014 | NC\_038316.1 | Hepatovirus | BUO2BF86Colafr2010 | Coleura afra | Ghana | 2010 | NC\_027818.1 | Hepatovirus | Phoca vitulina | USA | 2011 | NC\_038314.1 | Hepatovirus | CIV459Lopsik2004 | Lophuromys sikapusi | Cote d'Ivoire | 2004 | NC\_038313.1 | Hepatovirus | SMG18520Minmav2014 | Miniopterus | Madagascar | 2014 | Hepatovirus | Phoca vitulina | USA | 2011 | NC\_038313.1 | Hepatovirus | SMG18520Minmav2014 | Miniopterus | Madagascar | 2014 | Hepatovirus | Phoca vitulina | USA | 2011 | NC\_038313.1 | Hepatovirus | SMG18520Minmav2014 | Miniopterus | Madagascar | 2014 | Hepatovirus | Phoca vitulina | USA | 2011 | NC\_038313.1 | Hepatovirus | Phoca vitulina | USA | 2011 | NC\_038313.1 | Hepatovirus | SMG18520Minmav2014 | Miniopterus | Madagascar | 2014 | Hepatovirus | Phoca vitulina | USA | 2015 | Phoca vitulina | USA | 2016 | Phoca vitulina | USA | 2017 | Phoca vitulina | Phoca vitulina | Ph Hepatovirus

NC\_004451.1 | Sapelovirus | Simiiformes | USA | 2003

NC\_016964.1 | Mischivirus | 325 | Canis lupus familiaris | Hong Kong | 2008

NC\_040673.1 | Tremovirus | Pelodiscus sinensis | China | 2011 Enterovirus NC\_038312.1 | Enterovirus | Homo sapiens | USA | 2019 NC\_001490.1 | Enterovirus | Homo sapiens | USA | 1985 NC\_001617.1 | Enterovirus | Homo sapiens | USA | 1985 NC\_038878.1 | Enterovirus | NAT001 | Homo sapiens | USA | 2001 NC\_009996.1 | Enterovirus | Homo sapiens | Hong Kong | 2007 NC\_010354.1 | Aphthovirus | Bos taurus | United Kingdom | 2008 NC\_018226.1 | Pasivirus | Sus scrofa | France | 2010 NC\_030886.1 | Coronavirus | GCCDC1 356 | Rousettus leschenaulti | China | 2018

A

Genus

Cardiovirus

Enterovirus

HepatovirusKobuvirus

Parechovirus

Erbovirus

Teschovirus

Anativirus

Sapelovirus

Tremovirus

Avihepatovirus

Aquamavirus

Aphthovirus Senecavirus

Passerivirus Oscivirus

MischivirusPasivirus

Gallivirus

Limnipivirus

Hunnivirus

Dicipivirus

Megrivirus

Potămipivirus

Sicinivirus

Aalivirus

Rosavirus

Torchivirus

Malagasivirus

Harkavirus

**Ampivirus** 

Kunsagivirus

Shanbavirus

Rafivirus

PoecivirusRabovirus

Tottorivirus

Ailurivirus

Roupivirus

Coronavirus

Host

Bat hostNon-bat host

**Bootstrap** 

Madagascar bat kobuvirus

0.2

Livupivirus

Mosavirus

Avisivirus

Crohivirus

Bopivirus

Orivirus

Sakobuvirus

Unclassified picornavirus

Cosavirus

Salivirus

NC\_044855.1 | Norovirus | Homo sapiens | USA | 2016 NC 029647.1 | Norovirus | Homo sapiens | Australia | 2010 NC 045762.1 | Norovirus | Felis catus | USA | 2010 →NC\_044047.1 | Norovirus | Canis lupus familiaris | Hong Kong | 2007 NC\_044854.1 | Norovirus | Homo sapiens | Japan | 2000 NC\_044853.1 | Norovirus | Homo sapiens | Japan | 1998 -NC 001959.2 | Norovirus | Homo sapiens | USA | 1993 NC\_031324.1 | Norovirus | Pan troglodytes | USA | 2013 NC\_039897.1 | Norovirus | Shimizu/KK2866 | Homo sapiens | Japan | 2007 UNC\_044856.1 | Norovirus | Homo sapiens | Bangladesh | 2011 -•NC\_029645.1 | Norovirus | Bos taurus | Norway | 2006 --NC\_008311.1 | Norovirus | Mu/NoV/GV/MNV1/2002/USA | Homo sapiens | USA | 2002 NC\_012699.1 | Calicivirus | Sus scrofa | Canada | 2006 LONC 040674.1 | Norovirus | Marmota himalayana | China | 2013 -NC\_035675.1 | Minovirus | FHMCV/USA/MN/2012 | Pimephales promelas | USA | 2012 ——•NC\_024031.1 | Salovirus | Nordland/2011 | Salmo salar | Norway | 2011 NC 004064.1 | Nebovirus | Bovinae | USA | 2002 NC\_006875.1 | Calicivirus | TCG 14 | Bos taurus | Japan | 2003 NC\_007916.1 | Nebovirus | Bos taurus | United Kingdom | 2005 NC 030793.1 | Nebovirus | Bos taurus | Turkey | 2012 NC 017936.1 | Sapovirus | Chiroptera | Hong Kong | 2011 ---NC\_024078.1 | Calicivirus | Anatidae | China | 2012 - NC\_043516.1 | Nacovirus | L11043 | Meleagris gallopavo | Germany | 2011 NC 033081.1 | Bavovirus | Gallus gallus | Brazil | 2015 NC 034444.1 | Vesivirus | Homo sapiens | USA | 2016 NC\_011050.1 | Vesivirus | SSL2004-250F | Eumetopias jubatus | USA | 2004 NC\_002551.1 | Vesivirus | Sus scrofa | USA | 1996 NC 008580.1 | Vesivirus | Oryctolagus cuniculus | USA | 2004 NC\_004541.1 | Vesivirus | Odobenus rosmarus | USA | 2000 NC\_001481.2 | Vesivirus | Felidae | USA | 2000 -●NC\_019712.1 | Vesivirus | Mustela lutreola | China | 2007 LONC 025676.1 | Vesivirus | Otariinae | USA | 1981 NC\_004542.1 | Vesivirus | Canidae | Japan | 2000 -NC\_027122.1 | Vesivirus | Melogale | China | 2012 -●NC 000940.1 | Sapovirus | Sus scrofa | USA | 1999 NC 006554.1 | Sapovirus | Homo sapiens | Japan | 2004 NC\_010624.1 | Sapovirus | Homo sapiens | Thailand | 2003 NC\_006269.1 | Sapovirus | Homo sapiens | Germany | 2004 NC\_027026.1 | Sapovirus | Homo sapiens | Japan | 2012 NC\_011704.1 | Lagovirus | MIC-07 | Oryctolagus cuniculus | Australia | 2007 NC\_001543.1 | Lagovirus | Oryctolagus | Germany | 2000 NC\_002615.1 | Lagovirus | Lepus europaeus | France | 1996 LANC\_033776.1 | Sapovirus | Bat-SaV/Limbe65/CAM/2014 | Eidolon helvum | Cameroon | 2014 --NC\_043512.1 | Recovirus | Macaca mulatta | USA | 2008 ▲OQ818347 | Saplivirus | KEL207 | Rousettus madagascariensis | Madagascar | 2018 →OQ818348 | Saplivirus | MIZ345 | Rousettus madagascariensis | Madagascar | 2019 OQ818319 | Saplivirus | KEL166 | Eidolon dupreanum | Madagascar | 2018 → OQ818345 | Saplivirus | MIZ179 | Rousettus madagascariensis | Madagascar | 2018 OQ818340 | Saplivirus | Eidolon dupreanum | Madagascar | 2018 Language Languag 0.2

NC\_039476.1 | Norovirus | BJSMQ | Homo sapiens | China | 2016

•NC\_029646.1 | Norovirus | Homo sapiens | Vietnam | 2000

ONC\_039475.1 | Norovirus | Homo sapiens | South Korea | 2015

-ONC 044046.1 | Norovirus | Yuzawa/Gira2HS | Homo sapiens | Japan | 2014-

LONC\_044045.1 | Norovirus | Sapporo/HK299 | Homo sapiens | Japan | 2014

NC\_039477.1 | Norovirus | NORO\_226\_06\_01\_2016 | Homo sapiens | United Kingdom | 2016 |

NC 040876.1 | Norovirus | NORO 176-1 17 12 2015 | Homo sapiens | United Kingdom | 2015

NC\_044932.1 | Norovirus | Hu/GII.PNA4-GII.NA4/PNV06929/2008/PER | Homo sapiens | Peru | 2008