

**S2 Table. Rep sequences pulled from NCBI for SDT analysis.**

GoCV	gi 76009487 gb ABA39137.1  Rep [Goose circovirus]
RW-A	gi 254688518 ref YP_003084282.1  putative Rep protein [Circovirus-like genome RW-A]
RW-C	gi 254688525 ref YP_003084287.1  putative Rep protein [Circovirus-like genome RW-C]
BatCV09	gi 342356290 gb AEL28803.1  replication-associated protein, partial [Bat circovirus ZS/Yunnan-China/2009]
SOG00160	gi 429890862 gb AGA18245.1  hypothetical protein [uncultured marine virus]
SOG03994	gi 429890944 gb AGA18263.1  hypothetical protein [uncultured marine virus]
GOM00583	gi 429891106 gb AGA18314.1  hypothetical protein [uncultured marine virus]
GOM02856	gi 429891193 gb AGA18339.1  hypothetical protein [uncultured marine virus]
MarineCRESS1	gi 429891313 gb AGA18377.1  hypothetical protein [uncultured marine virus]
SI00142	gi 429891345 gb AGA18387.1  hypothetical protein [uncultured marine virus]
MarineCRESS2	gi 429891360 gb AGA18391.1  hypothetical protein [uncultured marine virus]
SI00850	gi 429891424 gb AGA18409.1  hypothetical protein [uncultured marine virus]
SI03654	gi 429891524 gb AGA18434.1  hypothetical protein [uncultured marine virus]
MarineCRESS3	gi 444298002 dbj GAC77838.1  replication protein [uncultured marine virus]
MarineCRESS4	gi 444298006 dbj GAC77836.1  replication protein, partial [uncultured marine virus]
MarineCRESS5	gi 444298044 dbj GAC77817.1  replication protein, partial [uncultured marine virus]
MarineCRESS6	gi 444298094 dbj GAC77792.1  replication protein, partial [uncultured marine virus]
MarineCRESS7	gi 444298146 dbj GAC77766.1  replication protein, partial [uncultured marine virus]
LM28925	gi 459116743 gb AGG39829.1  replication-associated protein [Diporeia sp. associated circular virus]
PGV	gi 508182168 ref YP_008052687.1  Rep domain protein [Phaeocystis globosa virus]
FdaCV	gi 528890055 gb AGS47835.1  replication-associated protein [Farfantepenaeus duorarum circovirus]
SaCV-12	gi 664651384 gb AIF34802.1  replication-associated protein [Sewage-associated circular DNA virus-12]
BatCV	gi 665518995 gb AIF76250.1  Rep [Bat circovirus]
LDMD15	gi 725829244 ref YP_009109675.1  replication-associated protein [Circoviridae 15 LDMD-2013]
LDMD21	gi 725829260 ref YP_009109686.1  replication-associated protein [Circoviridae 21 LDMD-2013]
AHEaCV2	gi 761263102 gb AJP36339.1  replication-associated protein, partial [Avon-Heathcote Estuary associated circular virus 2]

AHEaCV6	gi 761263147 gb AJP36362.1  replication-associated protein [Avon-Heathcote Estuary associated circular virus 6]
AHEaCV5	gi 765702617 ref YP_009126884.1  replication-associated protein [Avon-Heathcote Estuary associated circular virus 5]
AHEaCV9	gi 765702634 ref YP_009126896.1  replication-associated protein [Avon-Heathcote Estuary associated circular virus 9]
AHEaCV19	gi 765702674 ref YP_009126925.1  replication-associated protein [Avon-Heathcote Estuary associated circular virus 19]
EquCy	gi 850199434 gb AKN50607.1  Rep protein [Cyclovirus Equ1]
FCCV	gi 922073305 ref YP_009163918.1  putative replication initiation protein [Fiddler Crab associated circular virus]
CalCV	gi 922073318 ref YP_009163927.1  putative replication initiation protein [Calanoida sp. copepod associated circular virus]
DLaCV6	gi 927769377 gb ALE29847.1  replication associated protein, partial [Dragonfly larvae associated circular virus-6]