

Figure S1 Uncropped images of SDS-PAGE gel, ponceau stained and chemiluminescent substrate exposed membranes used in the study. Number mentioned are figures where these are used the manuscript.

Tankyrase	MSSSAGHHLASTIQQHQQQQSSSGSASLSSASNPTRSMLSVNLEAAAMANDPLRDLF	60
PARP5b	-----MSGRRCAGGGA-----ACASAAAEAVEPAARELF	29
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Tankyrase	EACKTGDLVKVKLITSQTVNARDTAGRKSTPLHFAAGYGRDVEFLLTNGASIQARDD	120
PARP5b	EACRNGDVERVKRLVTPEKVNSTRDAGRKSTPLHFAAGFGRKDVVEYLLQNGANVQARDD	89
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Tankyrase	GGLHPLHNACSFHADVVRLLEAGANPNTRDNWNYTPLHEAASKGKVDVCIALLQHGAD	180
PARP5b	GGLIPLHNACSFHAEVNNLLLRHGADPNARDNWNITPLHEAAIKGKIDVCIVLLQHGAE	149
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Tankyrase	PNIRNSENKIPLDLADPCTRPVLGTGEYRKDELLEAARSSEERLLELLTPLNVNCHASDG	240
PARP5b	PTIRNTDGR TALDLADPSAKAVLTGEYKDELLESARSGNEEKMMALLTPLNVNCHASDG	209
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Tankyrase	RKSTPLHLAAGYNIRVQILLQHGADVHAKDKGGLVPLHNACSYGHFEVTELLIKHGGN	300
PARP5b	RKSTPLHLAAGYNIRVQILLQHGADVHAKDKGGLVPLHNACSYGHFEVTELLIKHGGN	269
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Tankyrase	VNANDLWAFPLHEAASKRVEVCSLLLAEGADPTLLNCHNKSAIDSAPTRELQEKITYE	360
PARP5b	VNANDLWQFTPLHEAASKRVEVCSLLLSYGADPTLLNCHNKSAIDLAPTQLKERLAYE	329
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Tankyrase	YKGHCVLDAQRQADMRKKNLTETVNFHPYSGDTPHVAQSVYPRKQVLEVLIRK	420
PARP5b	FKGHSLLQAAREADVTRIKKHSLEWVNFHPQTHETALHCAASYPYKQICELLRLK	389
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Tankyrase	GALLNEKNKDFLTPHIAADNSHYEIMDVLLRHGAKVDSLDGLQTALHRCAREDNQAC	480
PARP5b	GANINEKTEFLTPHVAEKANDVVEVVKHEAKVNDNLGQSLHRAAYCGLQTC	449
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Tankyrase	RLLSYNIIDTSIVSLQGYTAAQLATENVKILQDPPS-DTVDELCQLLEAAKAGDLDTVR	539
PARP5b	RLLSYGDNPNIISLQGFALQMGNEVQQLQEGISLGNSEADRQLLEAAKAGDVEVTK	509
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Tankyrase	RIVLSNPMTVNCRDLGRHSTPLHFAAGYNRPVVEFLLEHGAEVHASDKGGLVPLHNAC	599
PARP5b	KLC--TVQSVNCRDIEGRQSTPLHFAAGYNRPVVEYLLQHGADVHAKDKGGLVPLHNAC	567
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Tankyrase	SYGHEVTELLVKHGANVNVADLWKFTPLHEAAAKGYEIVKLLIKHADVTKKNRDGT	659
PARP5b	SYGHEVAELLVKHGAENVNVADLWKFTPLHEAAAKGYEICKLLQHGADPTKKNRDGT	627
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Tankyrase	PLDLVREGDQDVADLLRGNAALLDAAKGNLARVQRLVTPDNINCRDAQGRNSTPLHLAA	719
PARP5b	PLDLVKDGDIDQDLRGDAALLDAAKGCCLARVKKLSSPDNINCRDTQGRHSTPLHLAA	687
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Tankyrase	GYNNLEVAEYLLHAGADVNAQDKGGLIPLHNASSYGHLDIAALLIKHNTVNVATDKWGYT	779
PARP5b	GYNNLEVAEYLLQHGADVNAQDKGGLIPLHNASSYGHVDAALLIKYNACVNVATDKWGYT	747
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Tankyrase	PLHEAAQKGRQQLCSLLLAHGADPFMKNQEGQTSLDLATAEDVKCLLDQAMVASQASTTA	839
PARP5b	PLHEAAQKGRQQLCALLLAHGADPTLKNQEGQTPDLVSADDSALLTAAMPSPALPSCY	807
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Tankyrase	NGSGTSMANSSLMATTCSPPTTETVLTPTGASMTLSVPVPQPLIRSCLSPAQGAETNVDG	899
PARP5b	KPQ-----VLNGVRSFGATADALSSGSPSS-----LSAASSLDNLSSGFSSELSS	853
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Tankyrase	VVL-----DDKMSQVVAIESSVSFAFSLQLEHLIELLEREQITMDILAEMGHEDLK	952
PARP5b	VVSSSGTEGASSLEKKEVPGVDFSIQFVRNLGLEHLMIDIFEREQITLDVLVEMGHKELK	913
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Tankyrase	QVGVSAYGFRHKILKGIATLRATT-GLG----LTPNPGTLLVDLLPDDKEFLAVEEEMQ	1006
PARP5b	EIGINAYGHRHKLIGVERLISGQGLNPYLTNTSGSGTILIDLSPODKFQSVVEEEMQ	973
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Tankyrase	ATIREHRDNGHGGYFTRYINVRQVQNRKLWERYVHRRKEISEENGHQASERMLFHGS	1066
PARP5b	STVREHRDGGHGGIFNRYNLIKIQKC-NKKLWERYTHRRKEVSEENHNHANERMLFHGS	1032
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Tankyrase	PFINAIQKGFDERHAYIGGMFAGIYFAEHSSKSNQVYVYIGGGIGCPAHKDKSCYQCH	1126
PARP5b	PFVNAIHKGFDERHAYIGGMFAGIYFAENSSKSNQVYVYIGGGIGCPVHKDRSCYICH	1092
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Tankyrase	RQLLCRVALGKSLQFSAMKMAHAPPGHHSVIGRPSAGGLHPEYVYVYRGEQAYPEYLI	1186
PARP5b	RQLLCRVTLGKSLQFSAMKMAHSPGHHSVIGRPSVNLALAEVYVYRGEQAYPEYLI	1152
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Tankyrase	TYQIVKPDSDASQPQEPAR	1204
PARP5b	TYQIMRPEGMVDG----	1165
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Figure S2 Sequence alignment of *Ae. aegypti* Tankyrase proteins and human PARP5b protein. The domains of *Ae. aegypti* Tankyrase were shown in coloured boxes. ■-Ankyrin repeats, ■-SAM domain, and ■-PARP catalytic domain. Asterisk (*) indicates fully conserved residue, colon (:) indicates conservation between groups of strongly similar properties, and period (.) indicates conservation between groups of weakly similar properties.

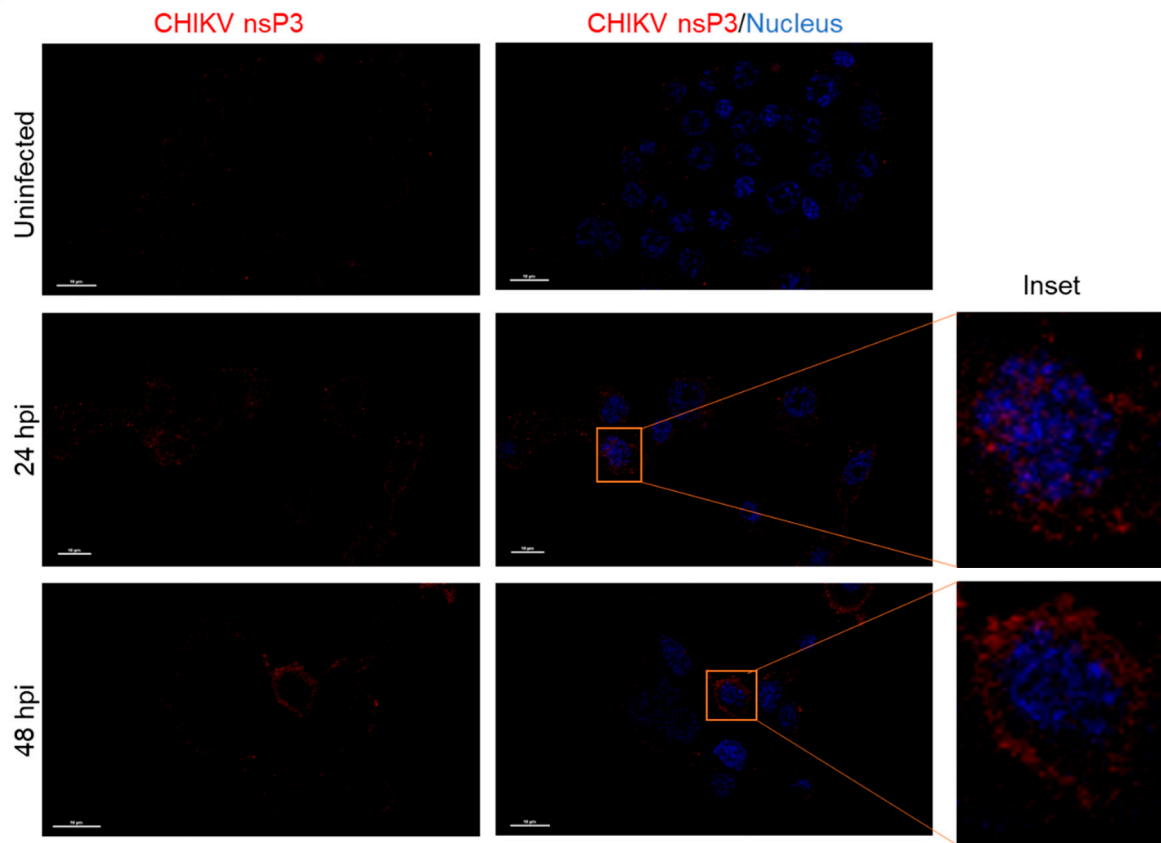


Figure S6 Immunofluorescence assay of CHIKV infected Aag2 cells. Aag2 cells were infected with CHIKV at MOI of 1 and fixed at 24 hpi and 48 hpi as well as uninfected cells. The cells were then incubated with anti-CHIKV nsP3 mice sera, followed by Alexa 594 anti-mouse IgG antibody. The nucleus was stained with DAPI. Cells were visualized in confocal microscope at 100X with oil immersion. The insets represent magnification of selected zones. Bar length=10 μ m.