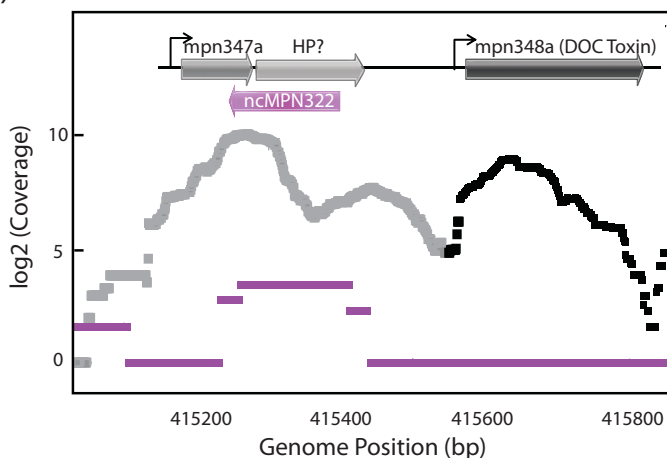


Figure S4

A)



B) ClustalW Alignment DOC protein of *M. pneumoniae* FH and MPN348a of *M. pneumoniae* M129

```

DOC M.pneumoniae FH      MREINVVYLSNDSKSKDDIDYLIIEELLVEGSRFKNSLVTFLKEKDCQS 50
MPN348a                  VREINVVYLSNDSKSKDDIDYLIIEELLVEGSRFKNSLVTFLKEKDCQS 50
:*****
DOC M.pneumoniae FH      CICLFKSKLSSSFIRVKFNELNLDASDEKTEFLRYIVSKSINNAKFLS 100
MPN348a                  CICLFKSKLSSSFIRVKFNELNLDASDEKTEFLRYIVSKSINNAKFLS 99
*****
DOC M.pneumoniae FH      SEDPDDKKEDEILLSIENTFNSYCYKSDLLSPSYCKEGRLNIIDLINDI 150
MPN348a                  SEDPDDKKEDEILLSIENTFNSYCYKSDLLSPSYCKEGRLNIIDLINDI 149
*****
DOC M.pneumoniae FH      FCKVLTFLKLSNGNKLATALLVNFLTYPGYFQWTIPLKKEEYFYAHM 200
MPN348a                  FCKVLTFLKLSNGNKLATALLVNFLTYPGYFQWTIPLKKEEYFYAHM 199
*****
DOC M.pneumoniae FH      IKNFVVSFEHKKRENRFELAKQTKKFIMDNILLALNFWETKLN 244
MPN348a                  IKNFVVSFEHKKRENRFELAKQTKKFIMDNILLALNFWETKLN 243
*****
    
```

Multiple sequence alignment of fic motif in Doc family members

```

MPN          DIFCKVLTFLKLSNGNKLATALLVNFLTYP
Pyrolobus fumarii  ALIYEAITRPLTDGNKRFAVLLRAFLKAN
Pseudomonas stutzeri HLLYFVIKNHPPSDGNKRSAALFVDFLGRN
2EVO        AKYVEMNIAHPPLEGNGRS-TRIVLDLVLKK
3EQX        XAHYQFEAIHPPIDGNGR-GR-VLNILFLI
VopS        HLFAGVI GYHGFTDGNGRM-GR-MLYAI AEL
    
```

C)

Conservation of genomic context mpn155a

