SUPPLEMENTAL DATA

FIGURE S1. Purified protein fractions of GST tagged RPS3 proteins and V5-his tagged RECQL4 proteins on coomassie blue stained SDS-PAGE

A) Coomassie blue stained SDS-PAGE showing final fractions of GST-FL-RPS3 (1-244 aa), GST-N-RPS3-his (1-94 aa), GST-C-RPS3-his (94-244 aa) and GST only proteins purified using a bacterial expression system. B) Coomassie blue stained SDS-PAGE showing final fractions of FL-RECQL4-V5-his (1-1208 aa), C-RECQL4-V5-his (314-1208 aa) and N-RECQL4-V5-his (1-320 aa) purified from 293 stable cell lines expressing respective proteins. * indicates position of the purified protein band on the coomassie blue stained SDS PAGE.

FIGURE S2. C-RPS3 (94-244 aa) but not N-RPS3 (1-94 aa), inhibits the ATPase activity of the RECQL4

Bar graph showing percentage of γ-^{32}P-ATP hydrolyzed by 80 nM RECQL4 in the presence of FL-RPS3 or N-RPS3 or C-RPS3 at indicated time points. ATPase activity of RECQL4 plotted against the reaction time course in the presence or absence of RPS3 proteins assayed by TLC. Error bars indicate SD of triplicate experiments. * indicates p value < 0.05.

FIGURE S3. RPS3 inhibits RECQL4-DNA binding in dose dependent manner

(Top) Representative 1X TBE PAGE showing the results of a RECQL4-EMSA performed in the presence or absence of indicated concentrations of FL-RPS3. All EMSA reactions contained the indicated concentrations of FL-RPS3, 50 nM RECQL4 protein and 50 nM 5'FAM-labeled 30 nt long single stranded DNA substrate. Unbound ssDNA and DNA-enzyme complex positions are illustrated on the right side of the gel. * represents position of the FAM label on the substrate. (Bottom) Scatter plot depicting percentage DNA bound against the concentration of RPS3 protein in the EMSA reaction (representative PAGE in the top panel). Data points shown are the mean of triplicate experiments with SD indicated as error bars.

FIGURE S1

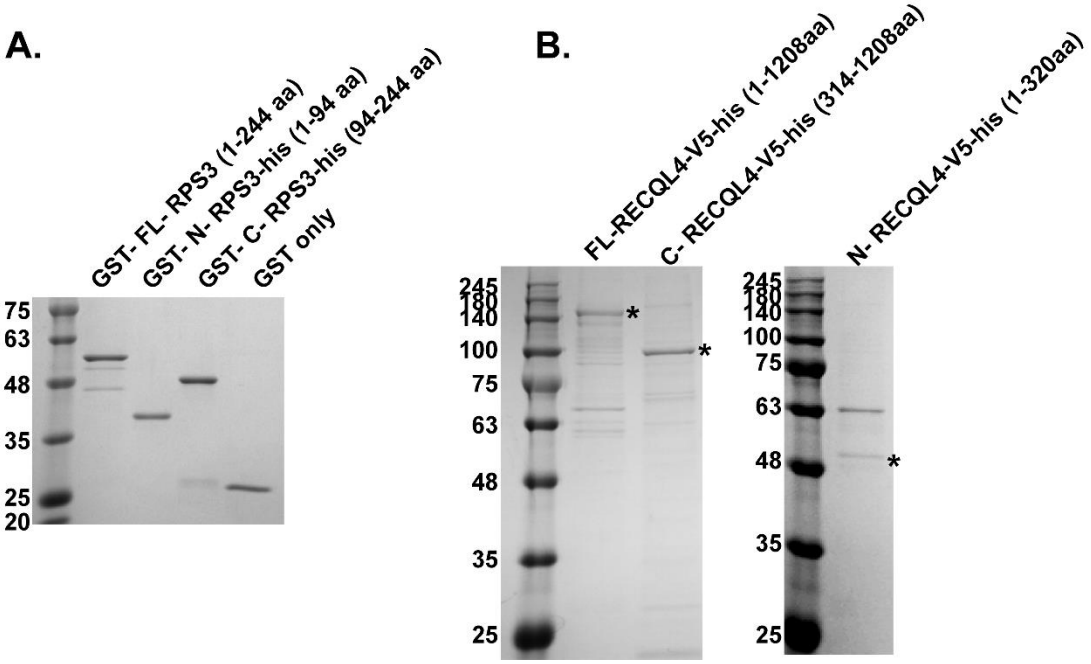

A.
GST- FL- RPS3 (1-244 aa)
GST- N- RPS3-his (1-94 aa)
GST- C- RPS3-his (94-244 aa)
GST only
75
63
48
35
25
20
B.
FL-RECQL4-V5-his (1-1208aa)
C- RECQL4-V5-his (314-1208aa)
N- RECQL4-V5-his (1-320aa)
245
180
140
100
75
63
48
35
25
*

FIGURE S2

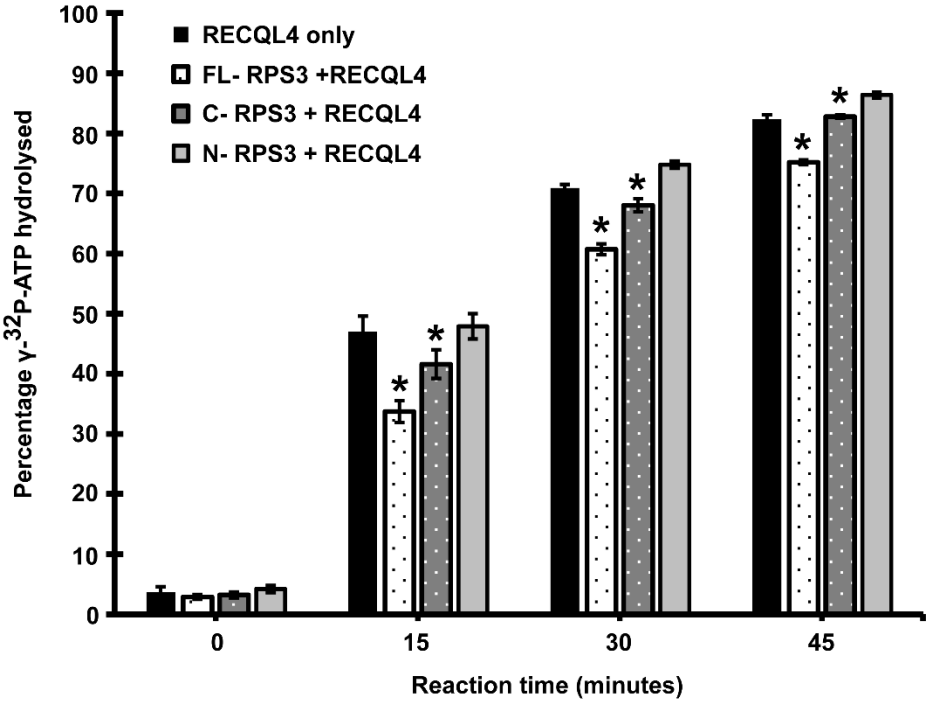
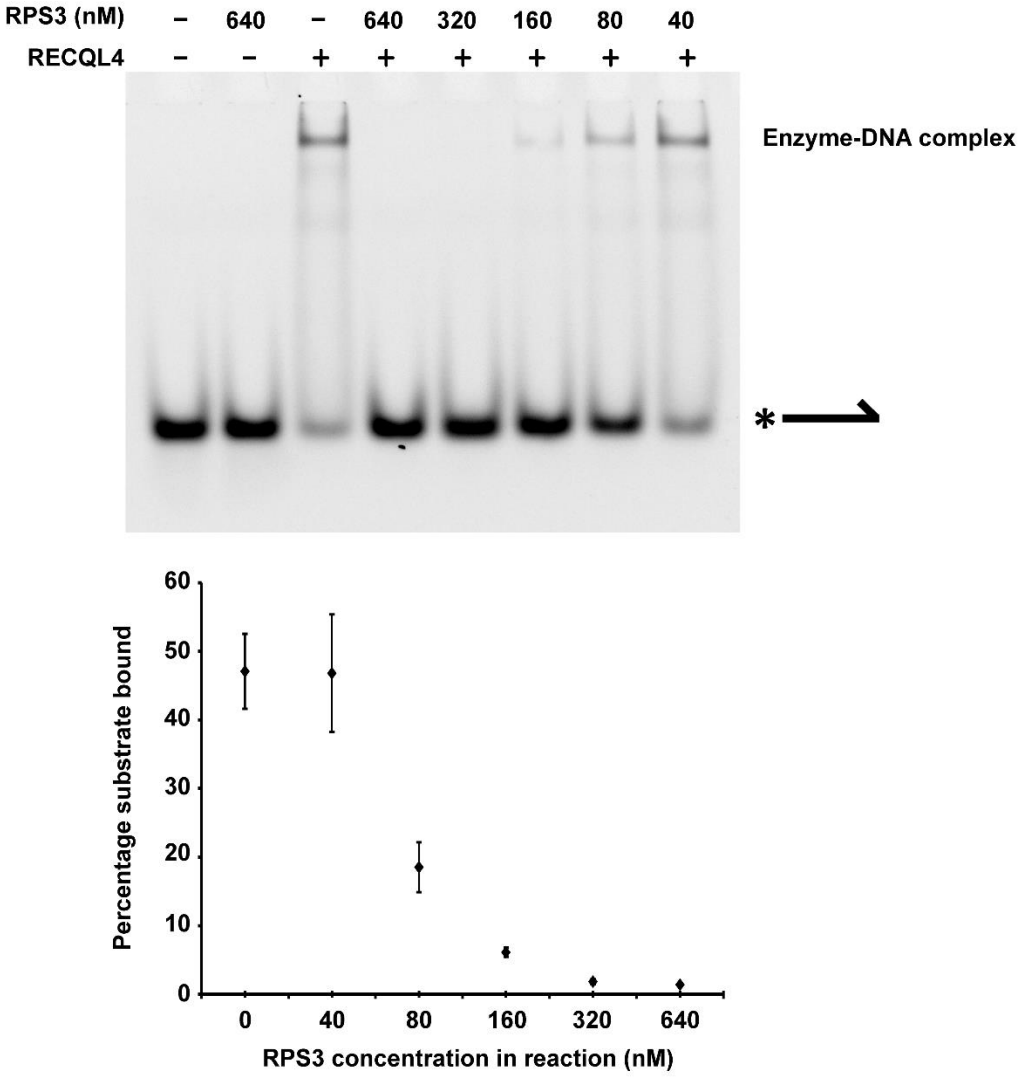

RECQL4 only
FL- RPS3 +RECQL4
C- RPS3 + RECQL4
N- RPS3 + RECQL4
Percentage γ-32P-ATP hydrolysed
100
90
80
70
60
50
40
30
20
10
0
0
15
30
45
Reaction time (minutes)
*
*
*
*
*

FIGURE S3


RPS3 (nM) – 640 – 640 320 160 80 40
RECQL4 – – + + + + + +
Enzyme-DNA complex
*
Percentage substrate bound
60
50
40
30
20
10
0
0 40 80 160 320 640
RPS3 concentration in reaction (nM)