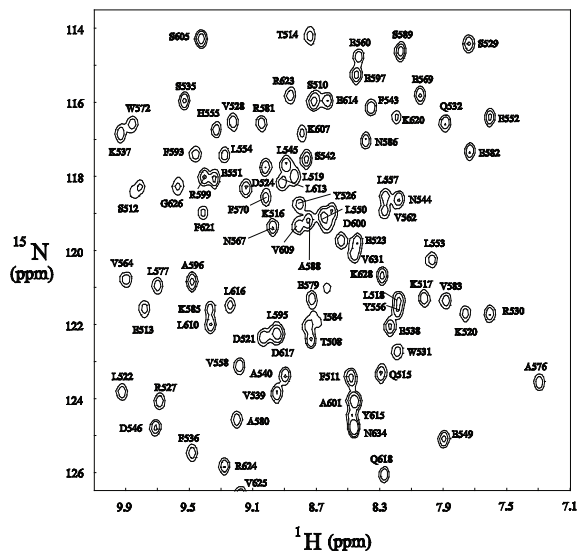
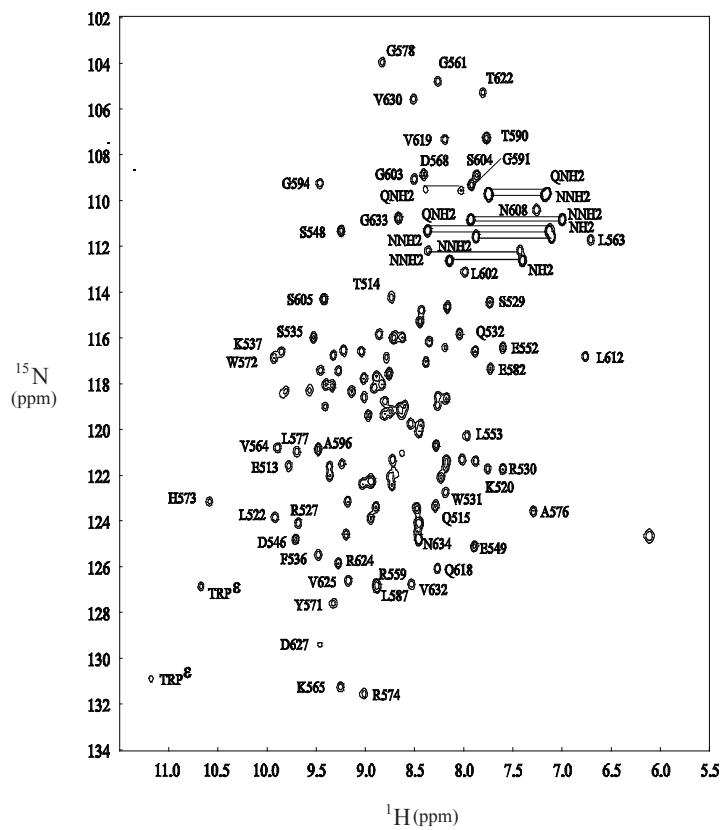
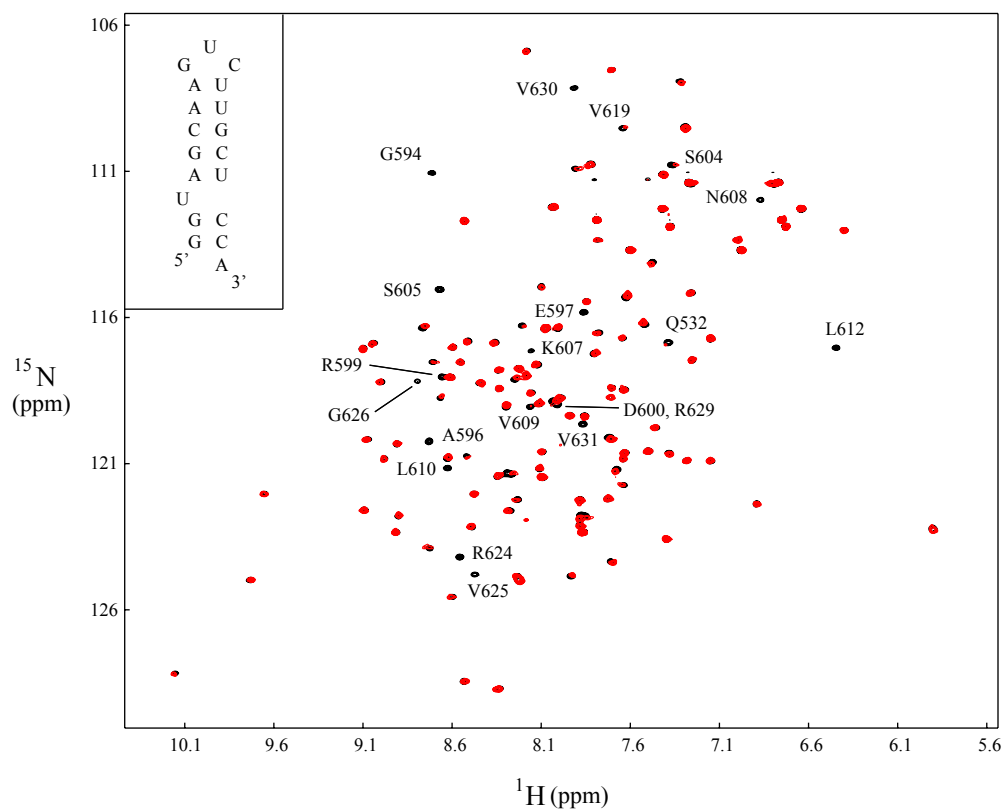


Supplementary Figure 1. Native gel analysis of SECIS-MT. Lane 1, 8 base-pair marker; lane 2, SECIS-MT in H₂O; lane 3, SECIS-MT in 1M NaCl. The SECIS-MT exists as a hairpin in H₂O but in the presence of 1M NaCl as a mixture of duplex and hairpin conformations.



Supplementary Figure 2. ^1H , ^{15}N HSQC of unbound SelB₅₀₈₋₆₃₄ at 20° C with the assignments labeled.



Supplementary Figure 3. Spectral overlay of the $\text{SeIB}_{508-634}$ ^1H , ^{15}N HSQC (black) and the $\text{SeIB}_{508-634}$ /SECIS-Ecoli complex ^1H , ^{15}N HSQC (red). Data were acquired at 25° C. Peaks that disappear in the RNA-bound form are annotated. Inset: Secondary structure of the *fdnG* SECIS element used in binding studies.