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Supporting Information

MBNL1–RNA Recognition: Contributions of MBNL1 Sequence and RNA Conformation

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cbic_201100487_sm_miscellaneous_information.pdf

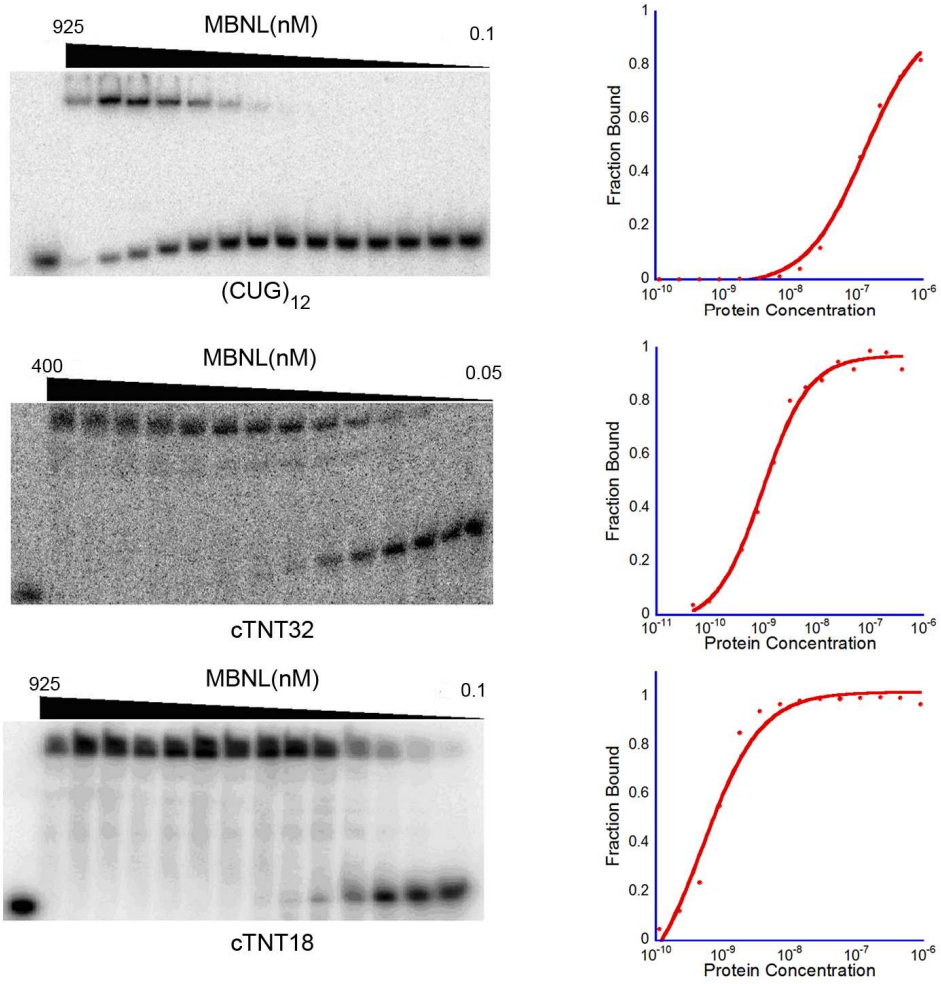


Figure S1. Representative results of gel mobility shift assays for MBNL1N with $(CUG)_{12}$ and cTNT RNAs. The protein concentration is noted on the top of each gel. The RNA concentration is 0.1 nM. The gels were run at 360V in 0.5X TB buffer.

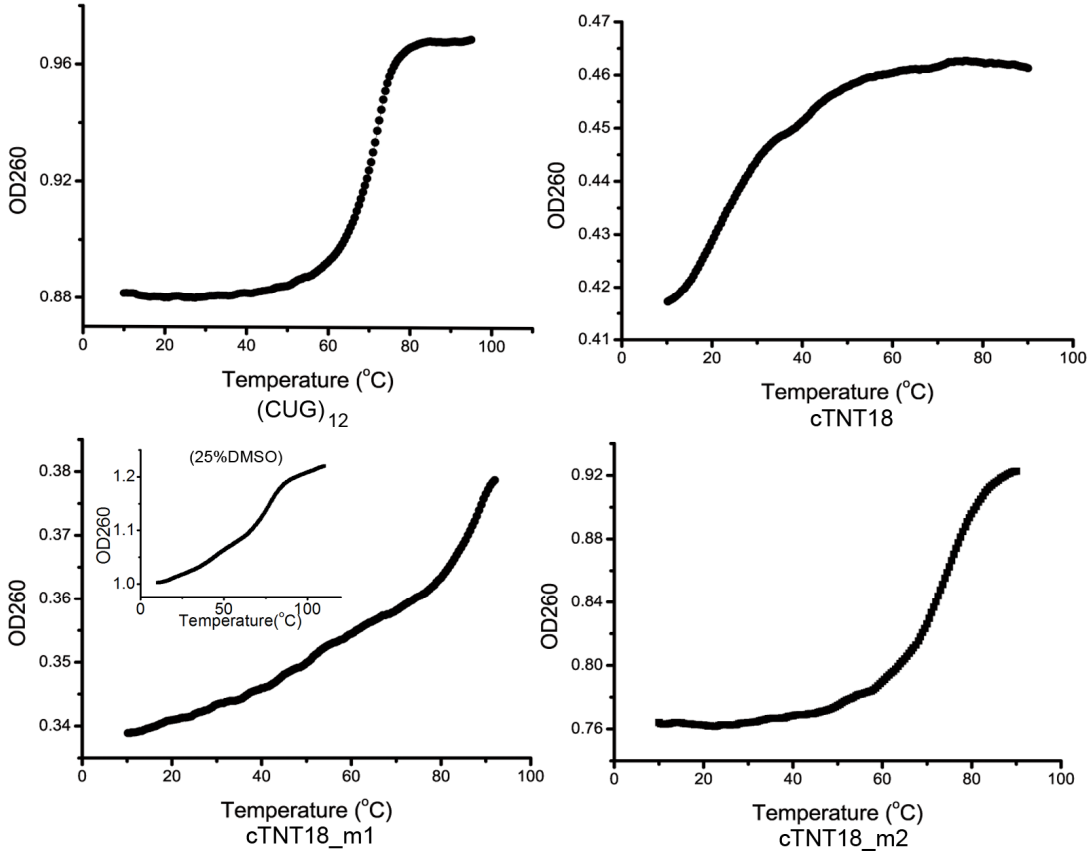


Figure S2. Representative melting curves of RNAs. The absorbance of each sample was monitored at 260 nm from 10 °C to 90 °C.

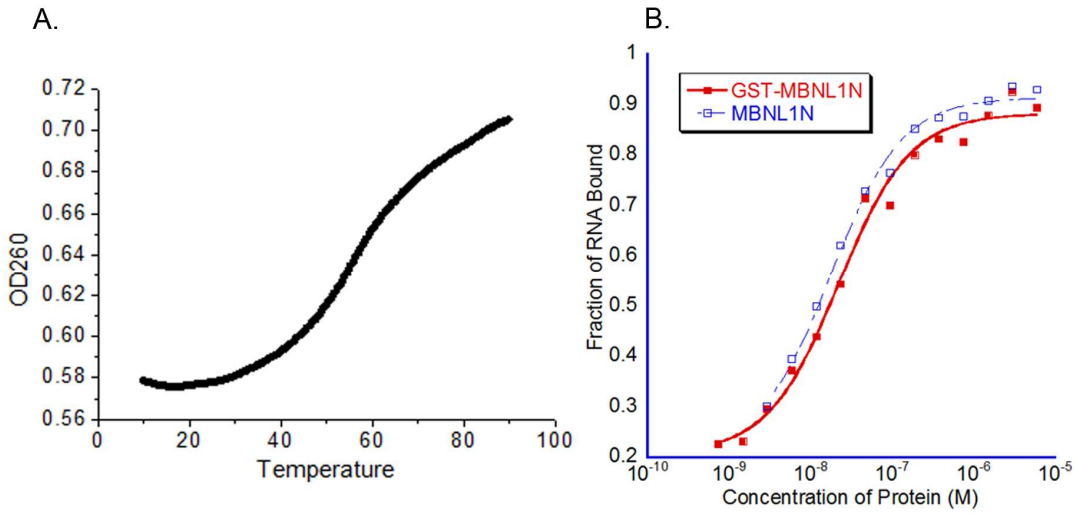


Figure S3. A) Melting temperature analysis of the quencher and fluorophore dual labeled RNA cTNT21*. B) Curve fitting for gel mobility shift assays of MBNL1N and GST-MBNL1N interacting with cTNT21 RNA.

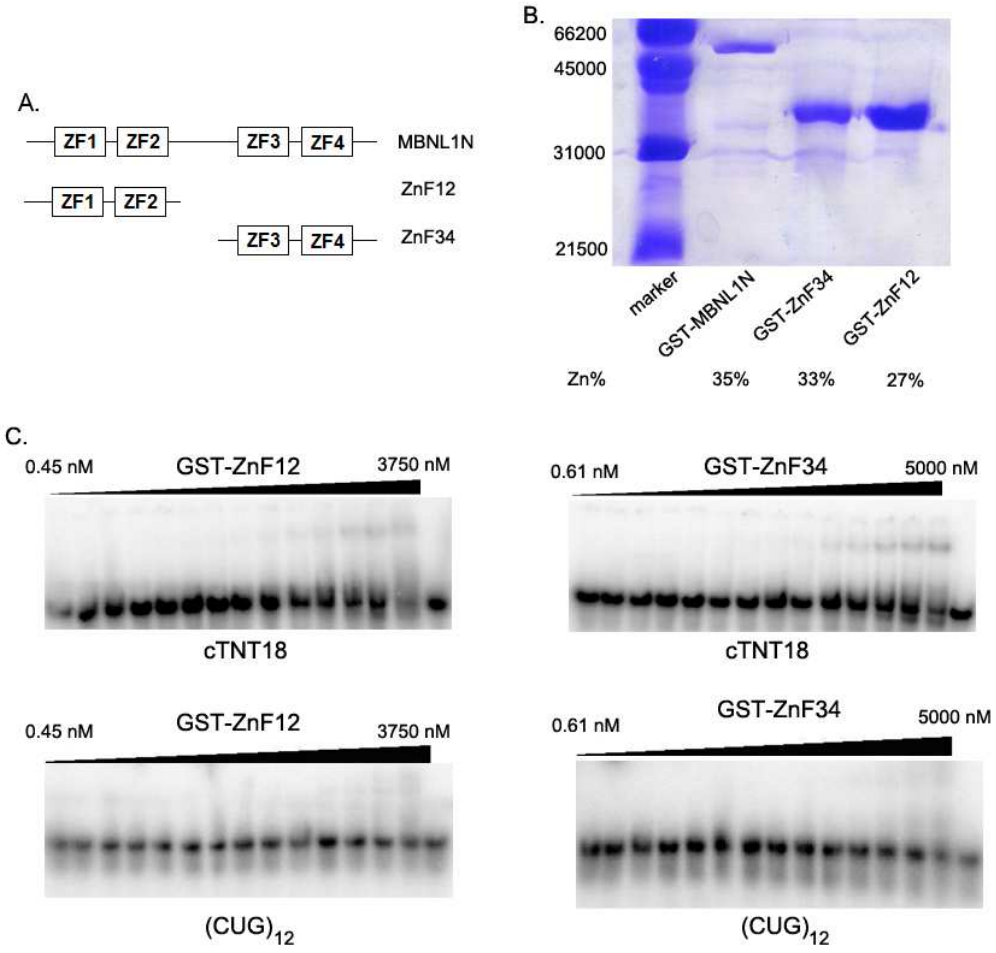
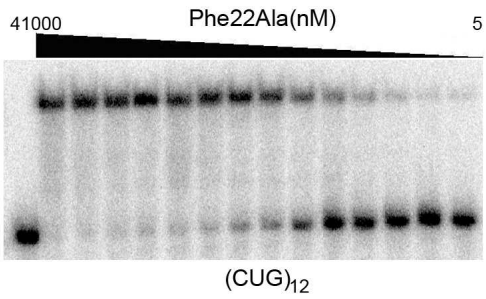
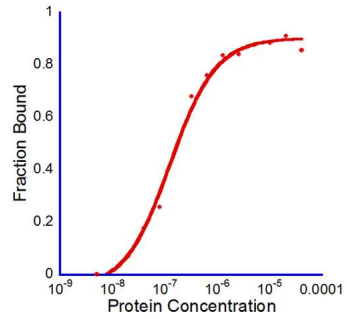
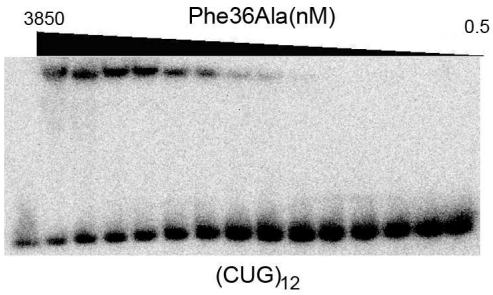
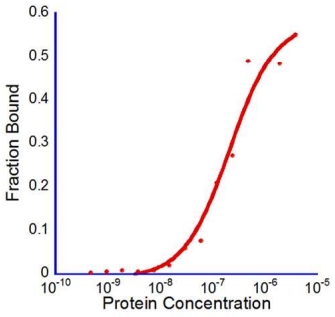


Figure S4. A) Schematic illustration of the relationship between truncated proteins and full-length MBNL1N. B) SDS-PAGE analysis of the purified proteins and analysis of zinc inclusion percentage by ICP-MS. C) Representative results of gel mobility shifts of truncated proteins with cTNT18 and $(CUG)_{12}$ RNAs.


41000
Phe22Ala(nM)
5
(CUG)12


Fraction Bound
Protein Concentration


3850
Phe36Ala(nM)
0.5
(CUG)12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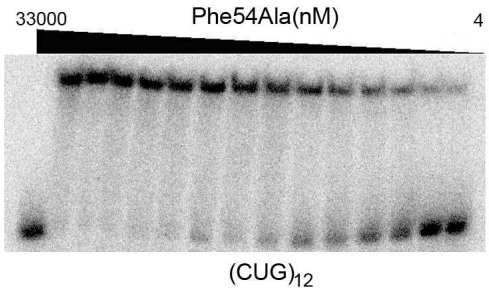
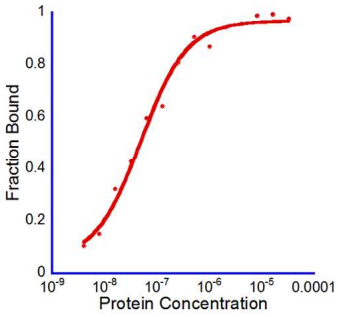
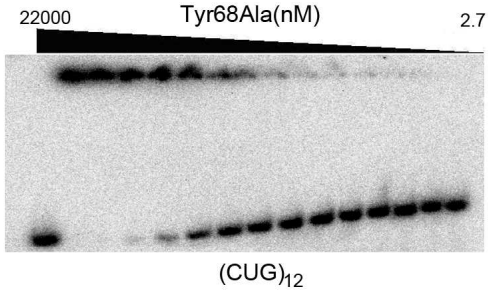
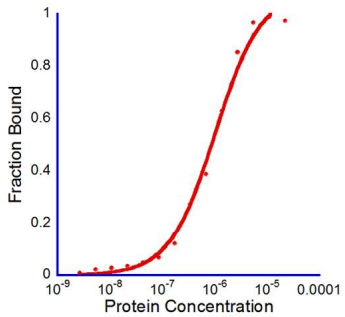
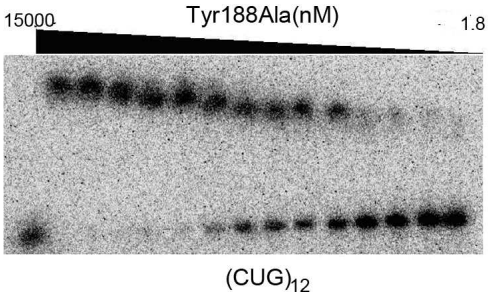
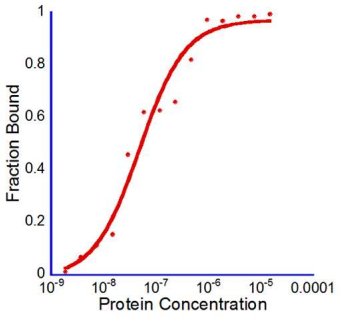

33000
Phe54Ala(nM)
4
(CUG)12


Fraction Bound
Protein Concentration


22000
Tyr68Ala(nM)
2.7
(CUG)12


Fraction Bound
Protein Concentration


15000
Tyr188Ala(nM)
1.8
(CUG)12


Fraction Bound
Protein Concentration

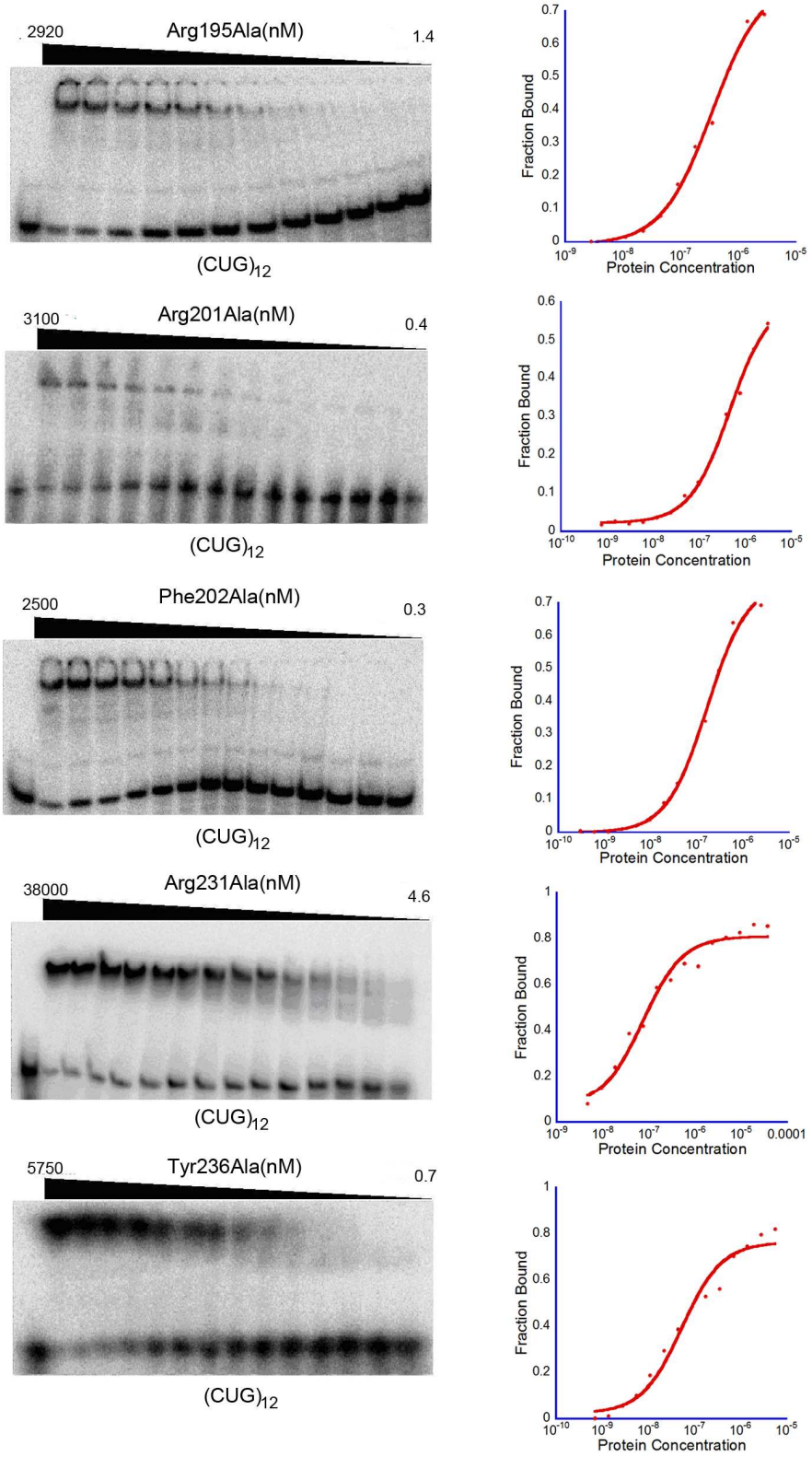


Figure S5. Representative results of gel mobility shift assays of mutant proteins and MBNL1N with $(CUG)_{12}$ RNA. The protein concentration is noted on top of each gel. The RNA concentration is 0.1 nM. The gels were run at 360V in 0.5X TB buffer.