

5' -UAGUAAAAUAAGAUAAUAUAUUUUUAAAAAAUGCAGCAGCAGCAGCAGCAGCAGCAGCAG

\* \* N K I I Y F \* K M Q Q Q Q Q Q Q Q Q Q  
 S K I R \* Y I F K K C S S S S S S S S S S  
 V K \* D N I F L K N A A A A A A A A A A A

CAGCAGCAGCAGCAGCAGUAGUAGUAGUAGUAGUAGUAGUAGUAGUAGUAGUAAAGCCAGGUU

Q Q Q Q Q Q \* \* \* \* \* \* \* \* \* \* S Q V  
 S S S S S S S S S S S S S S S S S K A R F  
 A A A A A V V V V V V V V V V V V K P G F

UUCUAACAUGAAGG-3'

F \* H E  
 S N M K  
 L T \* R

### Supplementary Figure 3: *Ataxin 8 (ATXN8)* open reading frame and flanking sequence.

Sequence analysis of three potential reading frames spanning the SCA8 repeat in CAG direction. Amino acids are indicated by standard one-letter symbols, and asterisks indicate stop codons. Only the polyglutamine-encoding reading frame (boxed on RNA sequence and shaded on amino acid sequence) has an AUG start codon between the last stop codon and the repeat tract. This short ORF [M(Q)n] is immediately followed by successive stop codons.