a

PAS hexmaer	Percentage
AATAAA	46.1
ATTAAA	16.3
TATAAA	4.7
AGTAAA	3.7
AAAAAA	3.4
TAAAAA	3.3
AAGAAA	2.7
AATATA	2.3
CATAAA	2.3
AATACA	2.2
GATAAA	1.7
AATGAA	1.5
ACTAAA	1.2
AAATAA	0.8
AATAGA	0.8
AAAACA	0.7
AAAATA	0.7
AAAAGA	0.5
AATAAT	0.5
AATTAA	0.5
TATTAA	0.4
AACAAT	0.4
AAAAAT	0.4
AACAAA	0.3
AAGAAT	0.3
AAACAA	0.3
AAAGAA	0.3
CATTAA	0.3
AAAAAG	0.2
CATAAT	0.2
ACTAAT	0.2
AAGTAA	0.2
AAAAAC	0.2
GATTAA	0.2
ATAAAA	0.1

b

PAS hexmaer	Percentage
AATAAA	50.2
ATTAAA	16.2
AAAAAA	4.5
TAAAAA	3.7
AGTAAA	3.6
TATAAA	3.4
AATACA	2.1
CATAAA	2.1
AAGAAA	2
AATATA	1.7
GATAAA	1.4
ACTAAA	1.1
AATGAA	1.1
AATAGA	0.8
AAAACA	0.6
AAATAA	0.6
AAAATA	0.5
AATTAA	0.4
AATAAT	0.4
AAAAGA	0.3
AAACAA	0.3
AAGTAA	0.3
AAAAAT	0.3
AAAGAA	0.3
AACAAT	0.2
AAAAAC	0.2
AACAAA	0.2
AAGAAT	0.2
CATAAT	0.2
TATTAA	0.2
AAAAAG	0.2
ACTAAT	0.2
CATTAA	0.1
ATAAAA	0.1
GATTAA	0.1

Supplementary Table 4. **Distribution of PAS hexamers at experimentally detected 3'-ends.** PAS hexamers used at all cleavage sites (Supplementary Figure 1d) or from cleavage sites restricted to the upstream antisense region (Supplementary Figure 5a). A red box is placed around the two most highly used PAS hexamers (AAUAAA and AUUAAA). All numbers are rounded to the nearest 10th decimal place. The PAS usage distribution at all cleavage sites and from upstream antisense regions are similar.