



Supplementary Figure 11. Illustration of the U1-PAS axis for divergent non-coding RNA control. At divergent promoters, RNAPII (depicted as a purple oval) transcribes in both downstream sense and upstream antisense directions, yet upstream antisense RNAs are frequently terminated shortly after initiation due to the high density of PAS (red stop sign) and a lack of strong U1 signals to suppress these sites. In contrast, PAS signals are low in the downstream sense direction and are generally protected by the binding of U1 snRNP (green hexagon) to a nearby 5' splice site denoted as 5'SS in black. A pink stop sign denotes a protected PAS. The U1-PAS axis may function to promote continued elongation throughout the gene and to ensure transcription is suppressed outside protein-coding genes.