**Supplementary Table 4** Most significant GO terms associated with the two DNA motifs found in the LUR. BP = Biological Process; CC = Cellular Component; MF = Molecular Function.

Motif 1	Motif 2
Positive regulation of transcription from RNA	Transcription (BP)
polymerase II promoter (BP)	
Transcription (BP)	Negative regulation of transcription from RNA
	polymerase II promoter (BP)
Negative regulation of transcription from RNA	-
Polymerase II promoter (BP)	
Transcription factor complex (CC)	<u>-</u>
Transcription activator activity (MF)	<u>-</u>