Figure S1. The first discovered motif in the upregulated lncRNA subgroup.

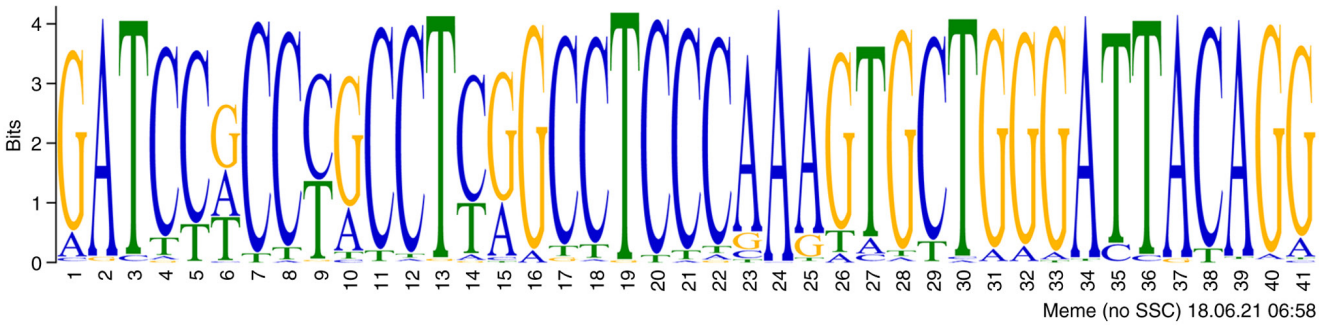

Figure S2. The second discovered motif in the upregulated lncRNA subgroup.

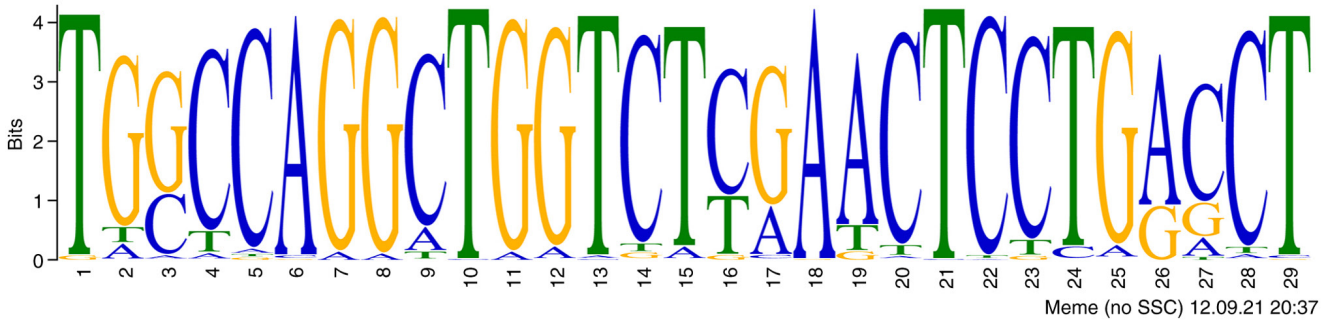

Figure S3. The third discovered motif in the upregulated lncRNA subgroup.

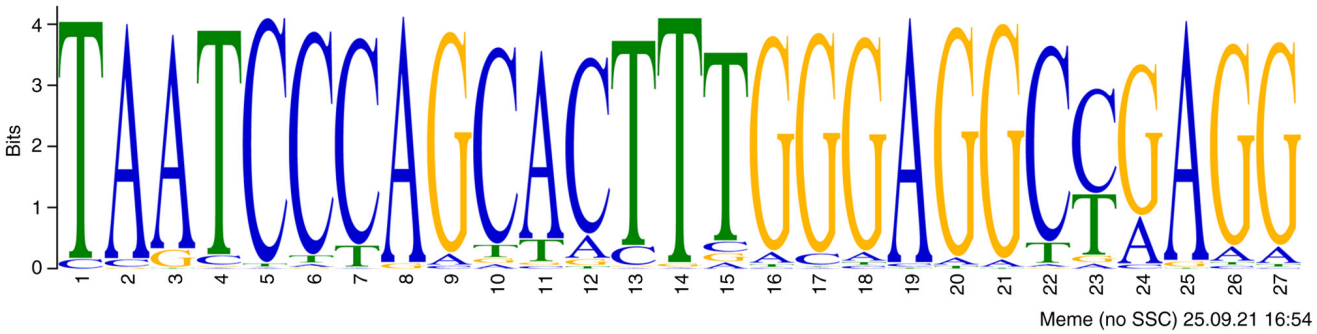

Figure S4. The first discovered motif in the downregulated lncRNA subgroup.

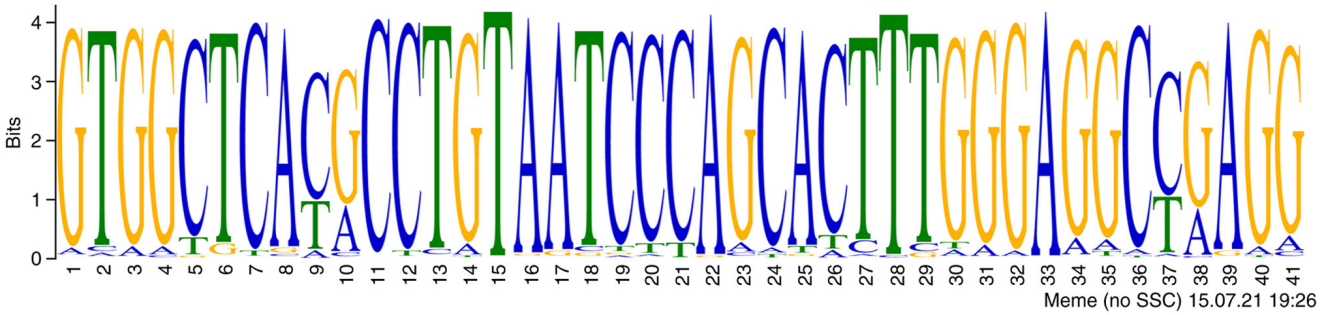

Figure S5. The second discovered motif in the downregulated lncRNA subgroup.

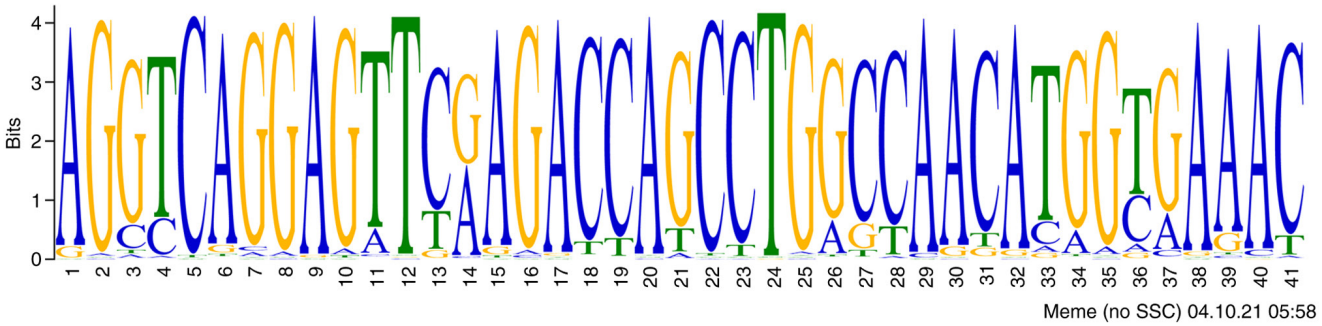

Figure S6. The third discovered motif in the downregulated lncRNA subgroup.

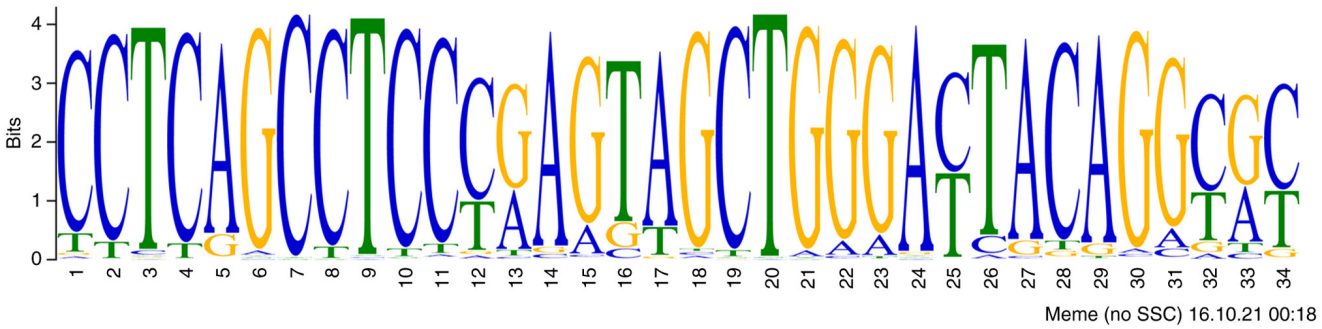

Figure S7. Human karyotype in which the percentage of the occurrence of motif 1 in each chromosome is presented.

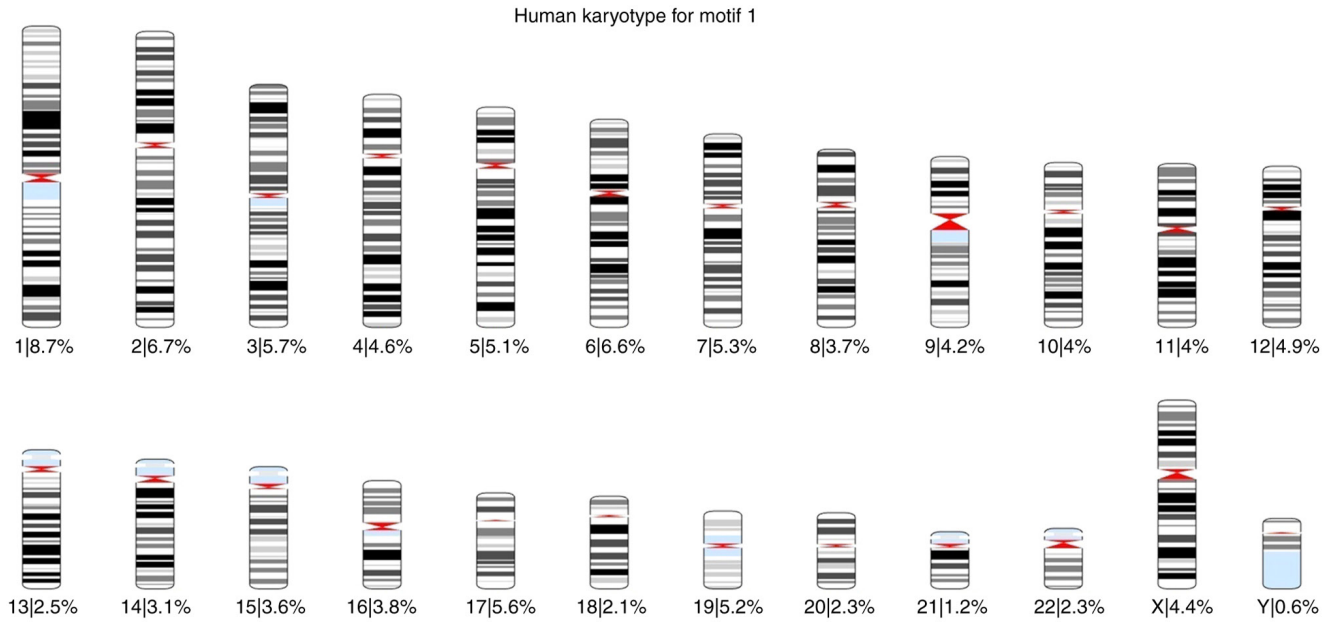

Figure S8. Human karyotype in which the percentage of the occurrence of motif 2 in each chromosome is presented.

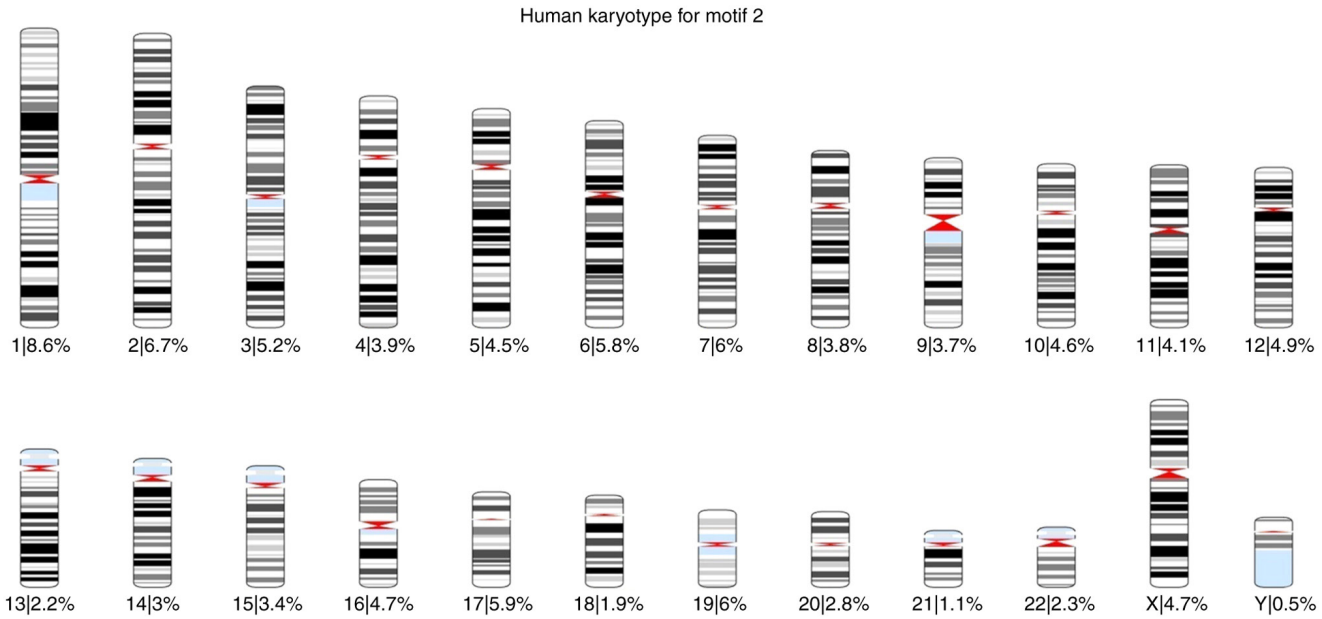

Figure S9. Human karyotype in which the percentage of the occurrence of motif 3 in each chromosome is presented.

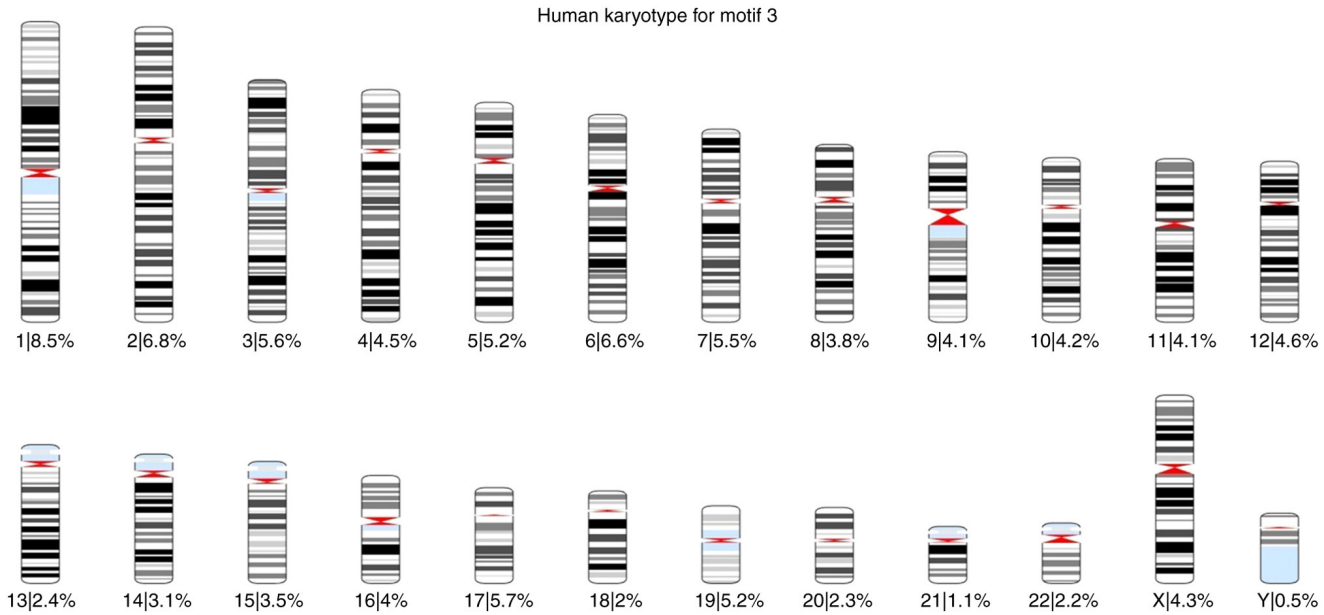

Figure S10. Human karyotype in which the percentage of the occurrence of motif 4 in each chromosome is presented.

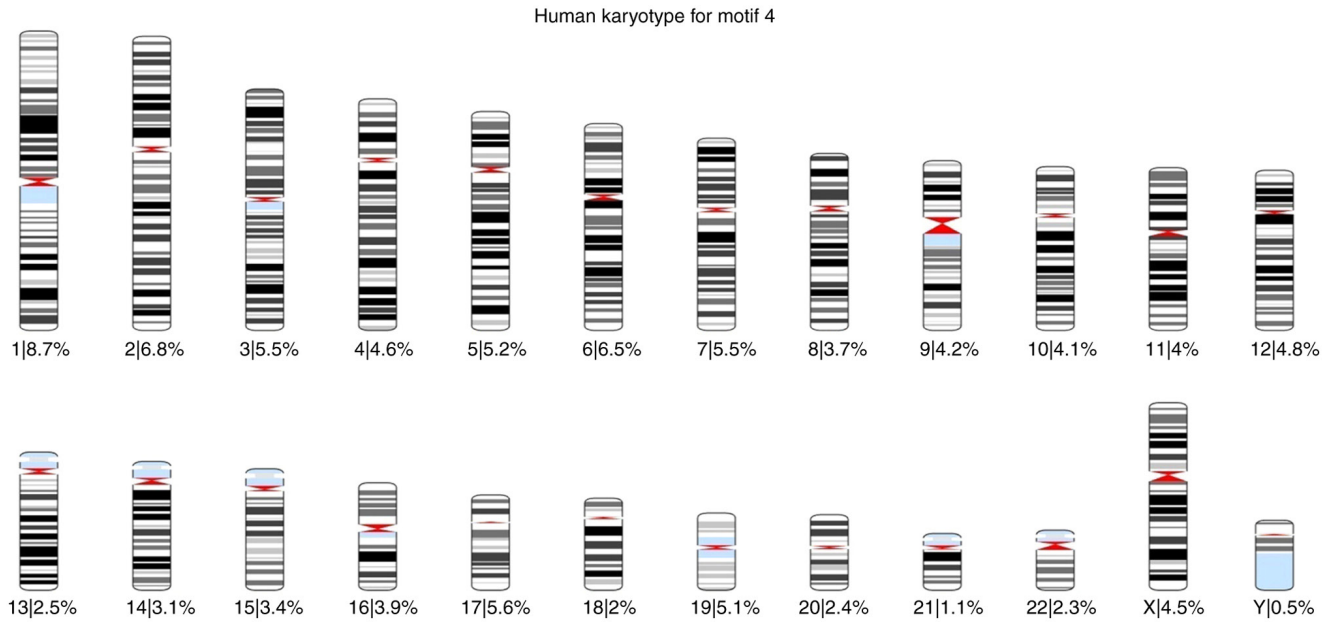

Figure S11. Human karyotype in which the percentage of the occurrence of motif 5 in each chromosome is presented.

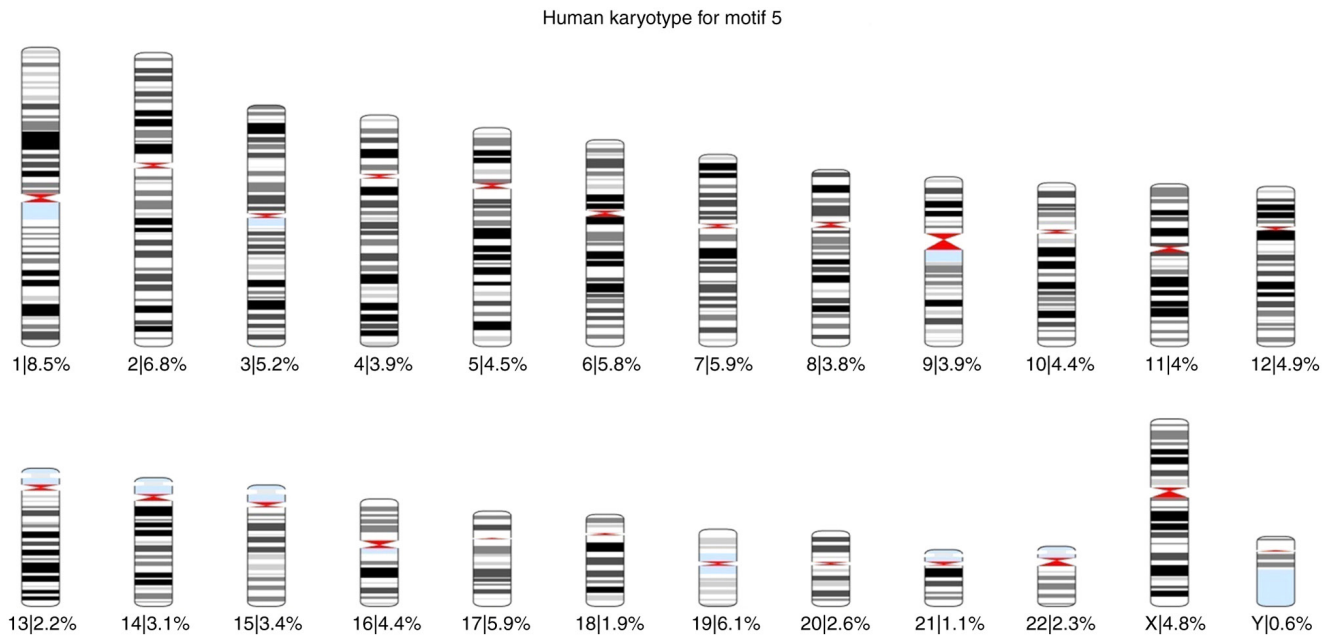

Figure S12. Human karyotype in which the percentage of the occurrence of motif 6 in each chromosome is presented.

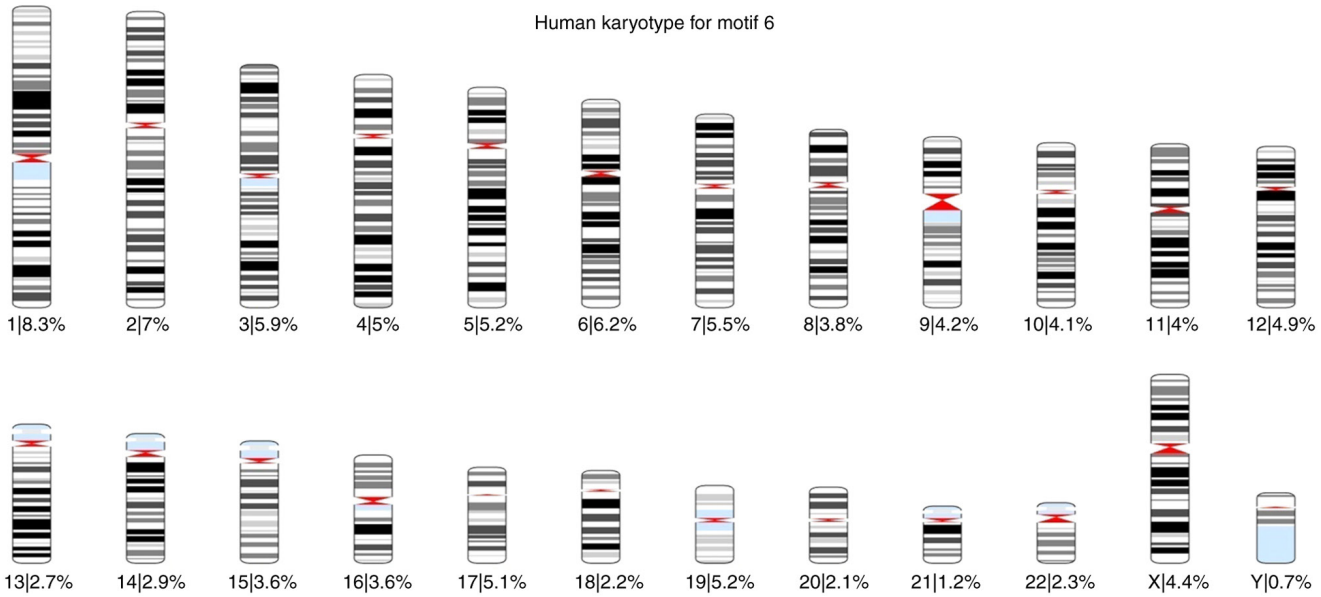

Figure S13. Chromosome plot for the 1,000 higher-scored loci of motif 1 in the human genome which are presented as red dots next to the corresponding chromosomal region where they are located.

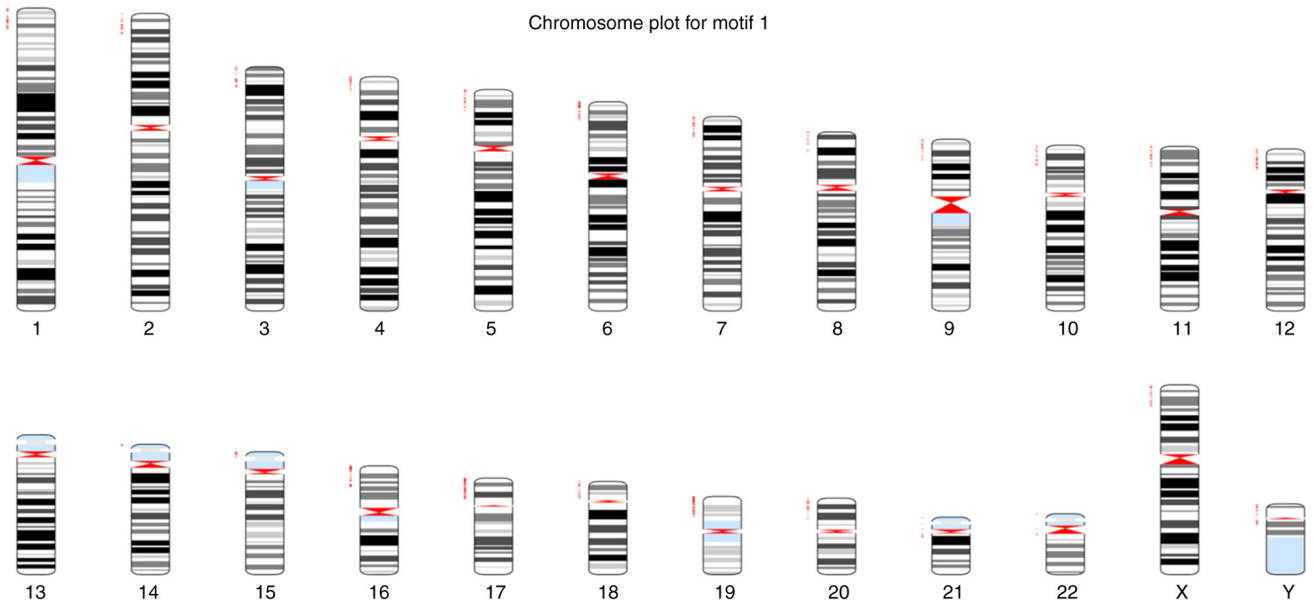

Figure S14. Chromosome plot for the 1,000 higher-scored loci of motif 2 in the human genome which are presented as red dots next to the corresponding chromosomal region where they are located.

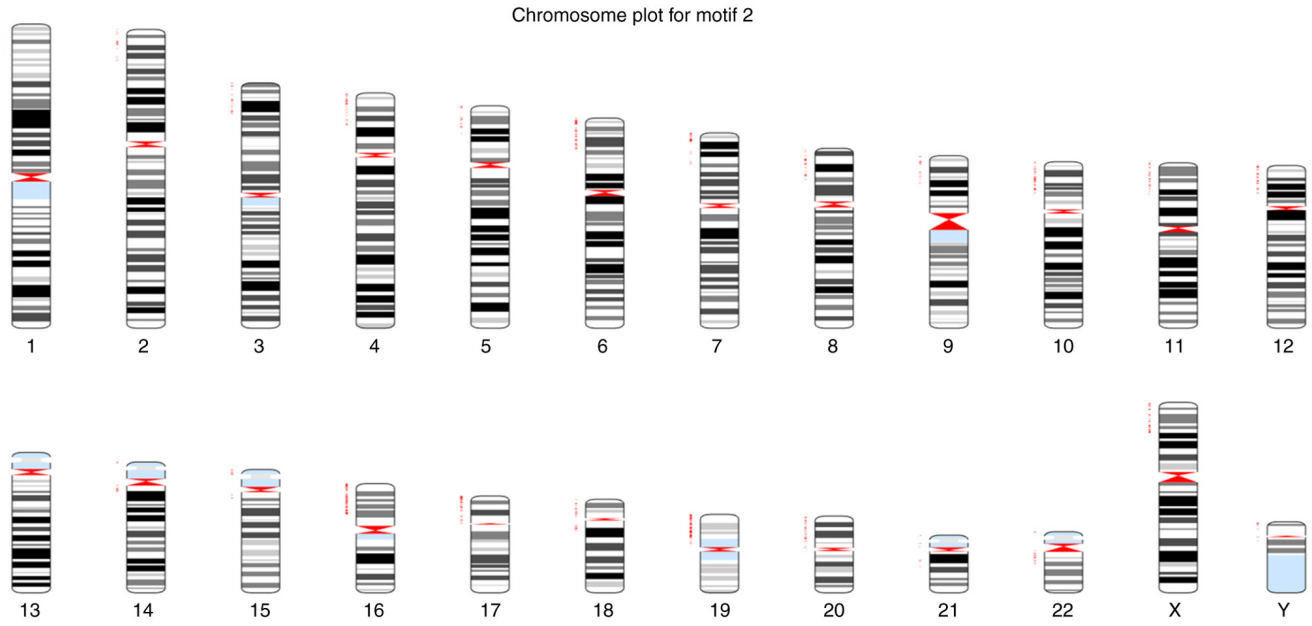

Figure S15. Chromosome plot for the 1,000 higher-scored loci of motif 3 in the human genome which are presented as red dots next to the corresponding chromosomal region where they are located.

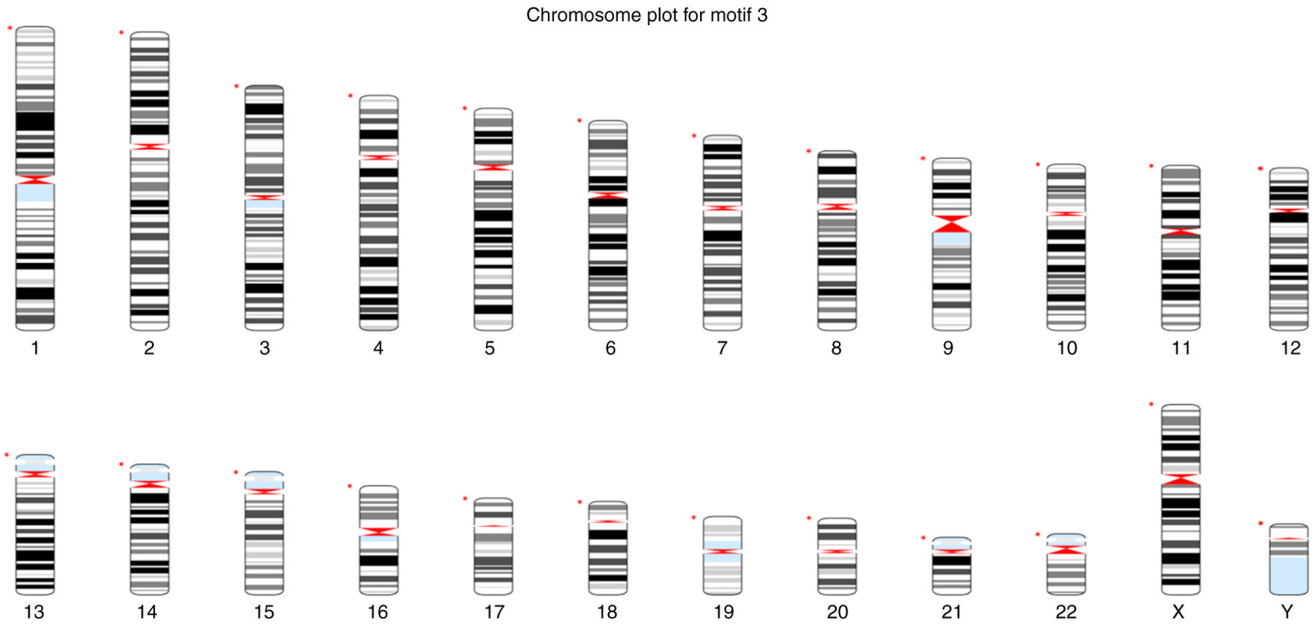

Figure S16. Chromosome plot for the 1,000 higher-scored loci of motif 4 in the human genome which are presented as red dots next to the corresponding chromosomal region where they are located.

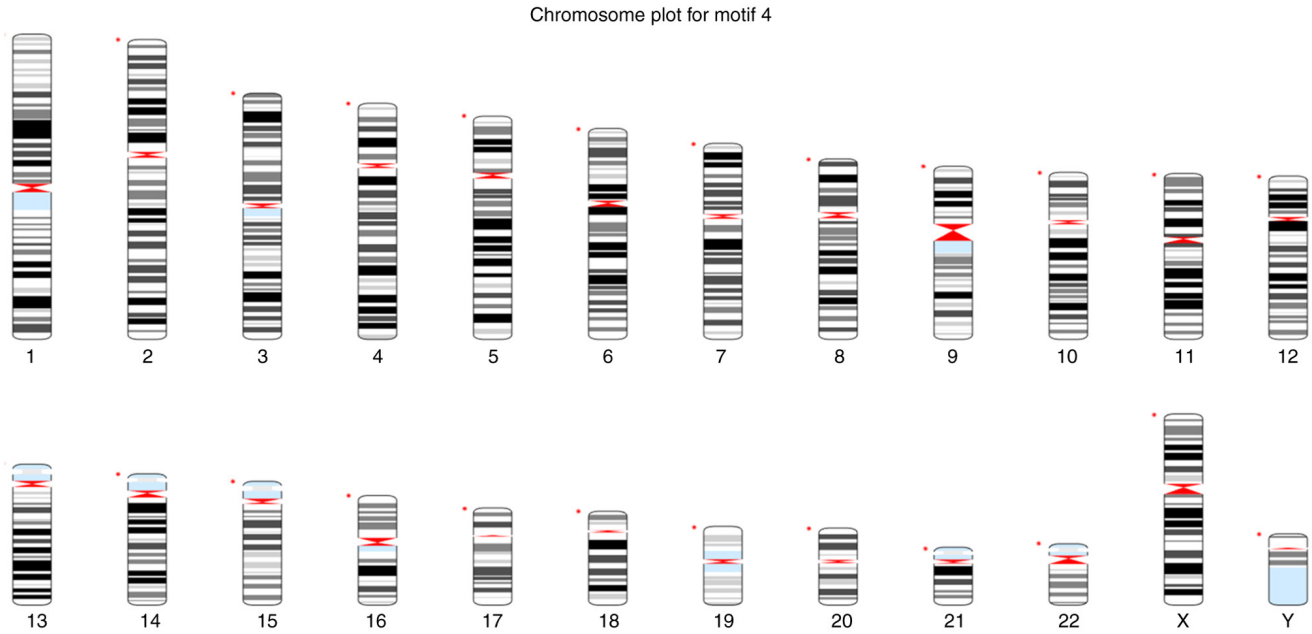

Figure S17. Chromosome plot for the 1,000 higher-scored loci of motif 5 in the human genome which are presented as red dots next to the corresponding chromosomal region where they are located.

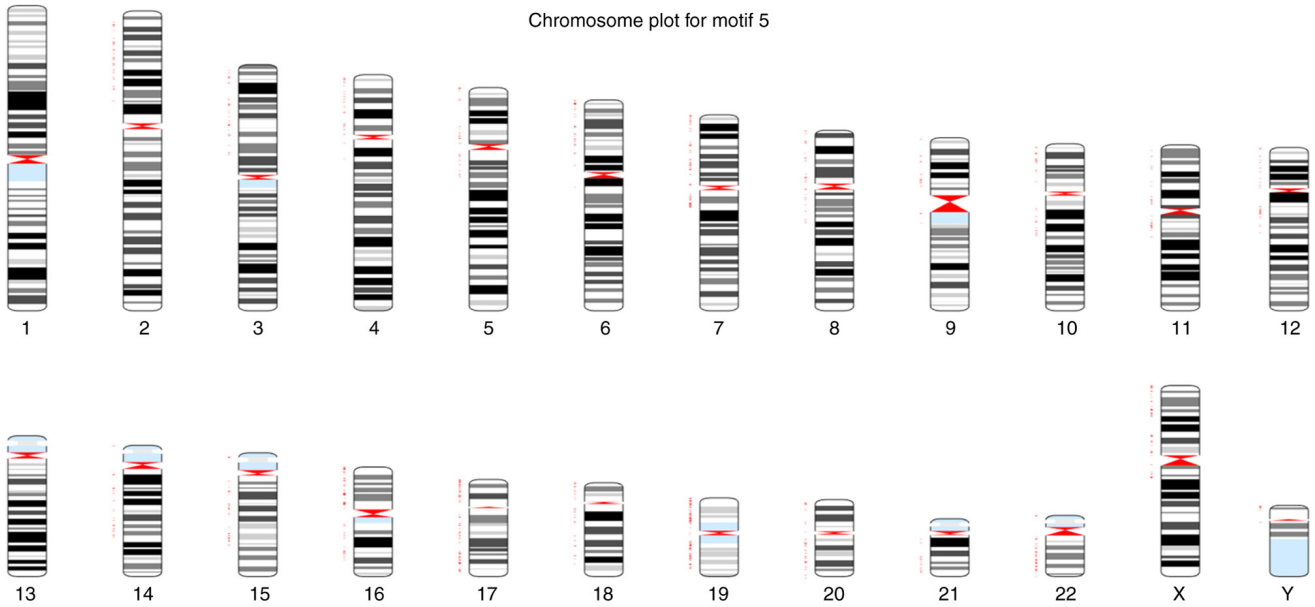

Figure S18. Chromosome plot for the 1,000 higher-scored loci of motif 6 in the human genome which are presented as red dots next to the corresponding chromosomal region where they are located.

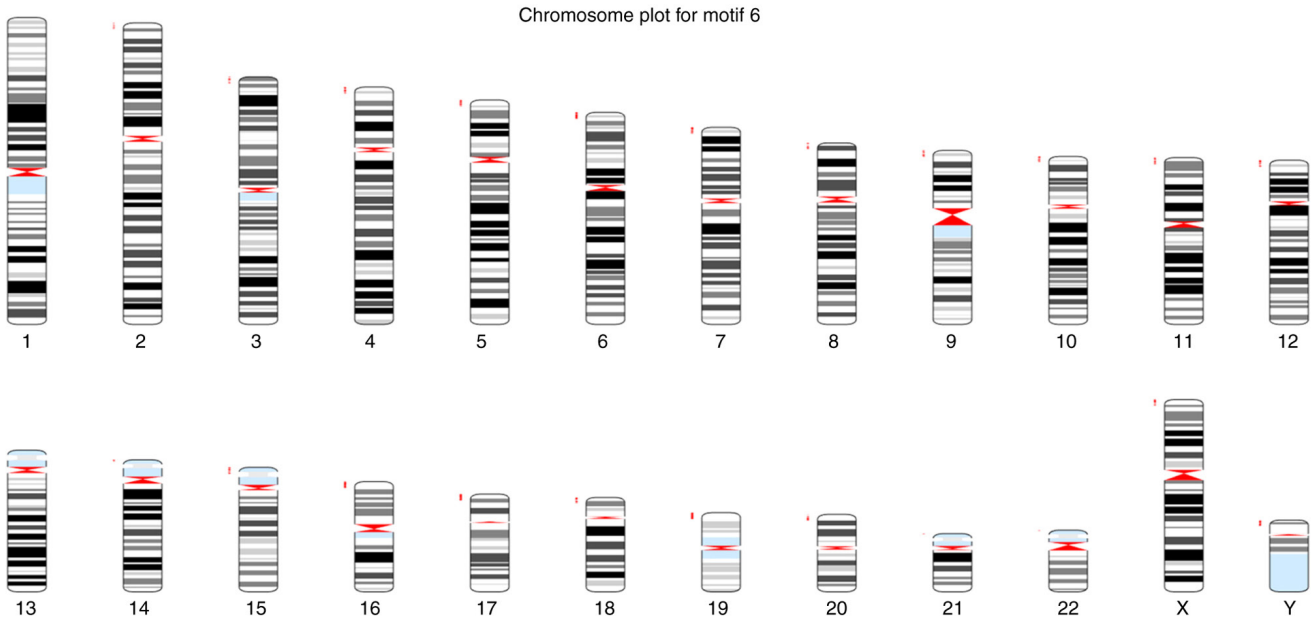

Figure S19. Multiple alignment of the sequences of motif 1 with AAVS1 site using Clustal Omega (51) visualized with JalView (52)

Figure S20. Multiple alignment of the sequences of motif 2 with AAVS1 site using Clustal Omega (51) visualized with JalView (52).

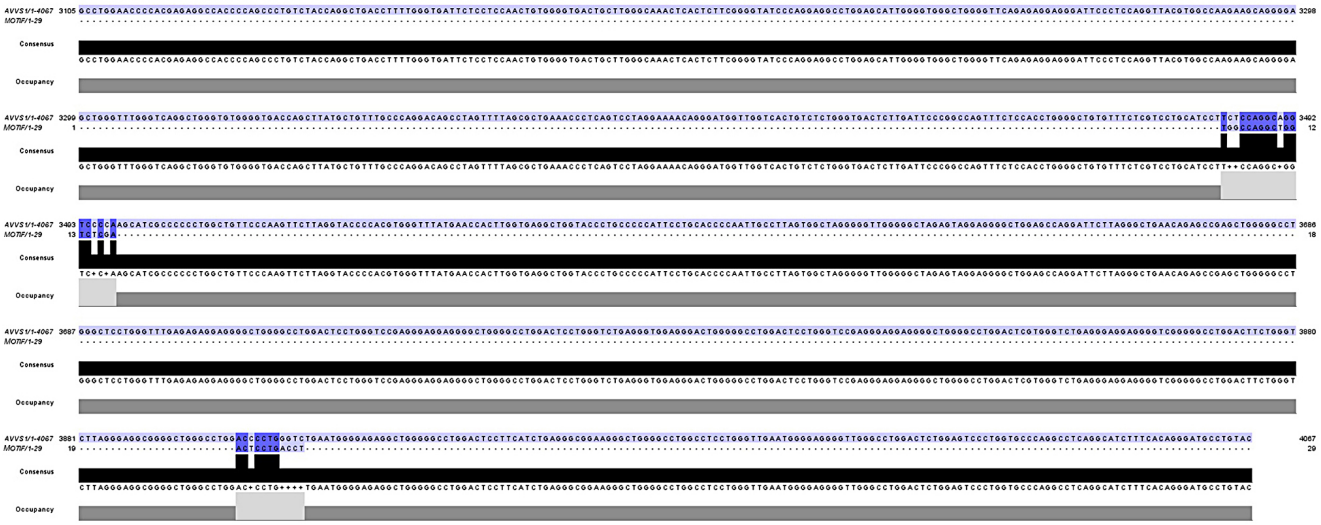

Figure S21. Multiple alignment of the sequences of motif 3 with AAVS1 site using Clustal Omega (51) visualized with JalView (52).

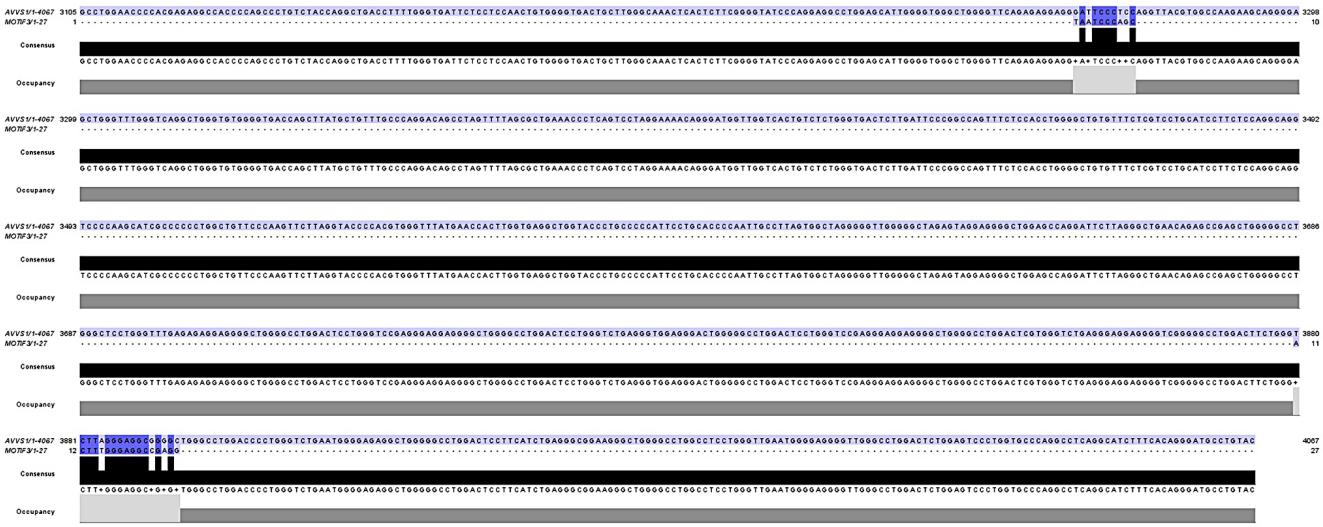

Figure S22. Multiple alignment of the sequences of motif 4 with AAVS1 site using Clustal Omega (51) visualized with JalView (52).

Figure S23. Multiple alignment of the sequences of motif 5 with AAVS1 site using Clustal Omega (51) visualized with JalView (52).

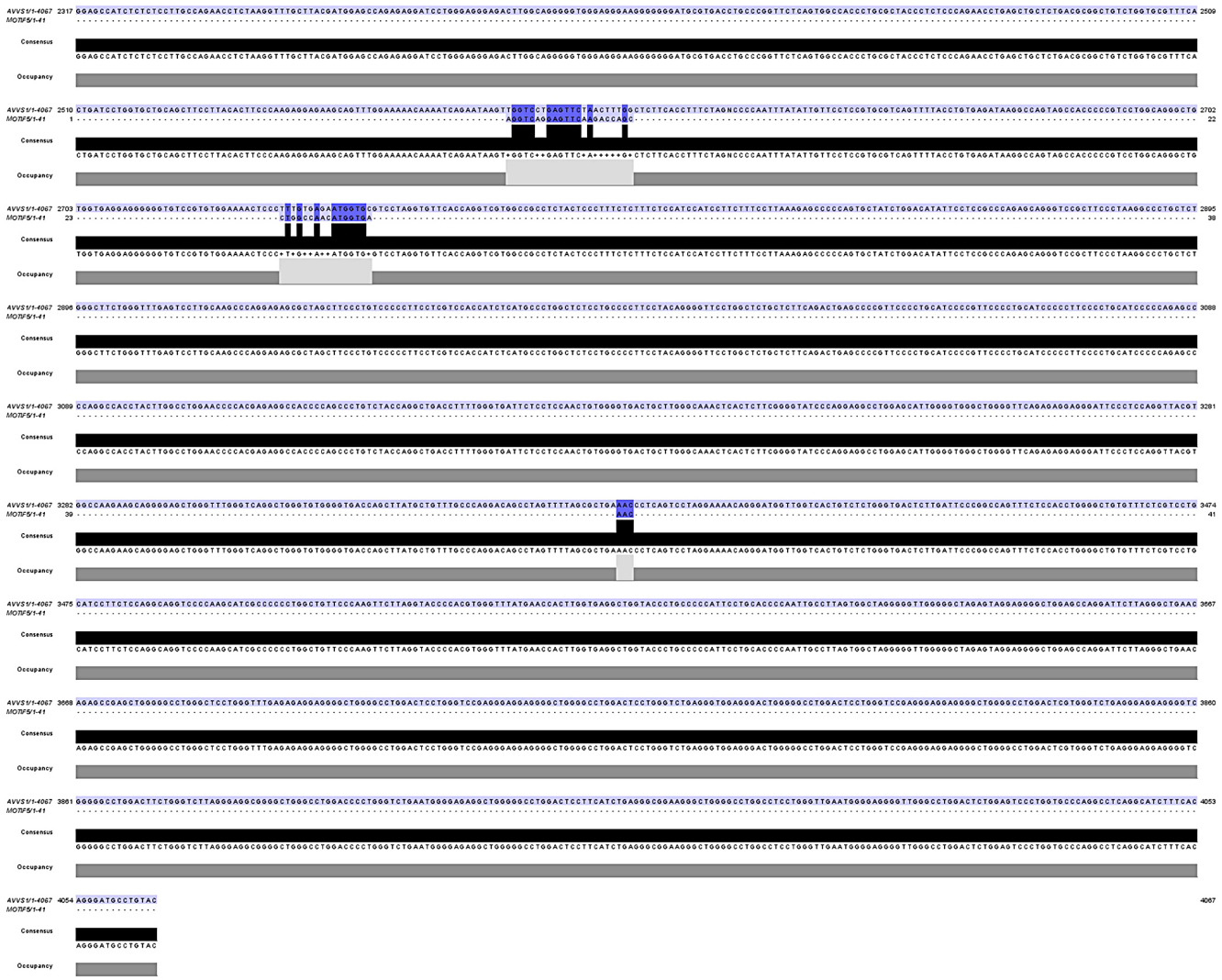

Figure S24. Multiple alignment of the sequences of motif 6 with AAVS1 site using Clustal Omega (51) visualized with JalView (52).

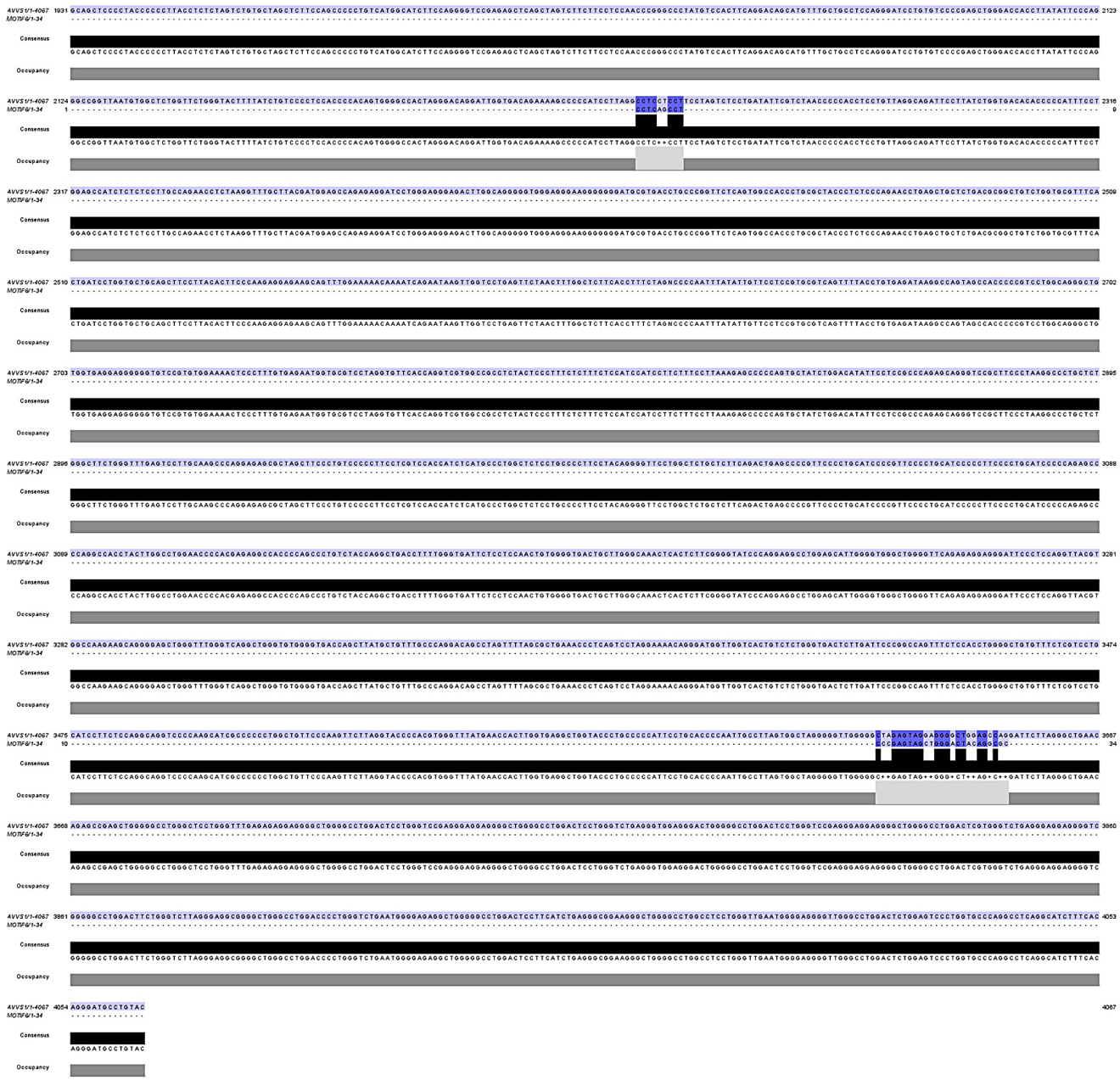

Figure S25. The biological pathways in which the lncRNAs that contain the motif 1 participate and have a regulatory function, according to GeneCards (https://www.genecards.org/) and NCBI Gene (https://www.ncbi.nlm.nih.gov/gene/) databases.

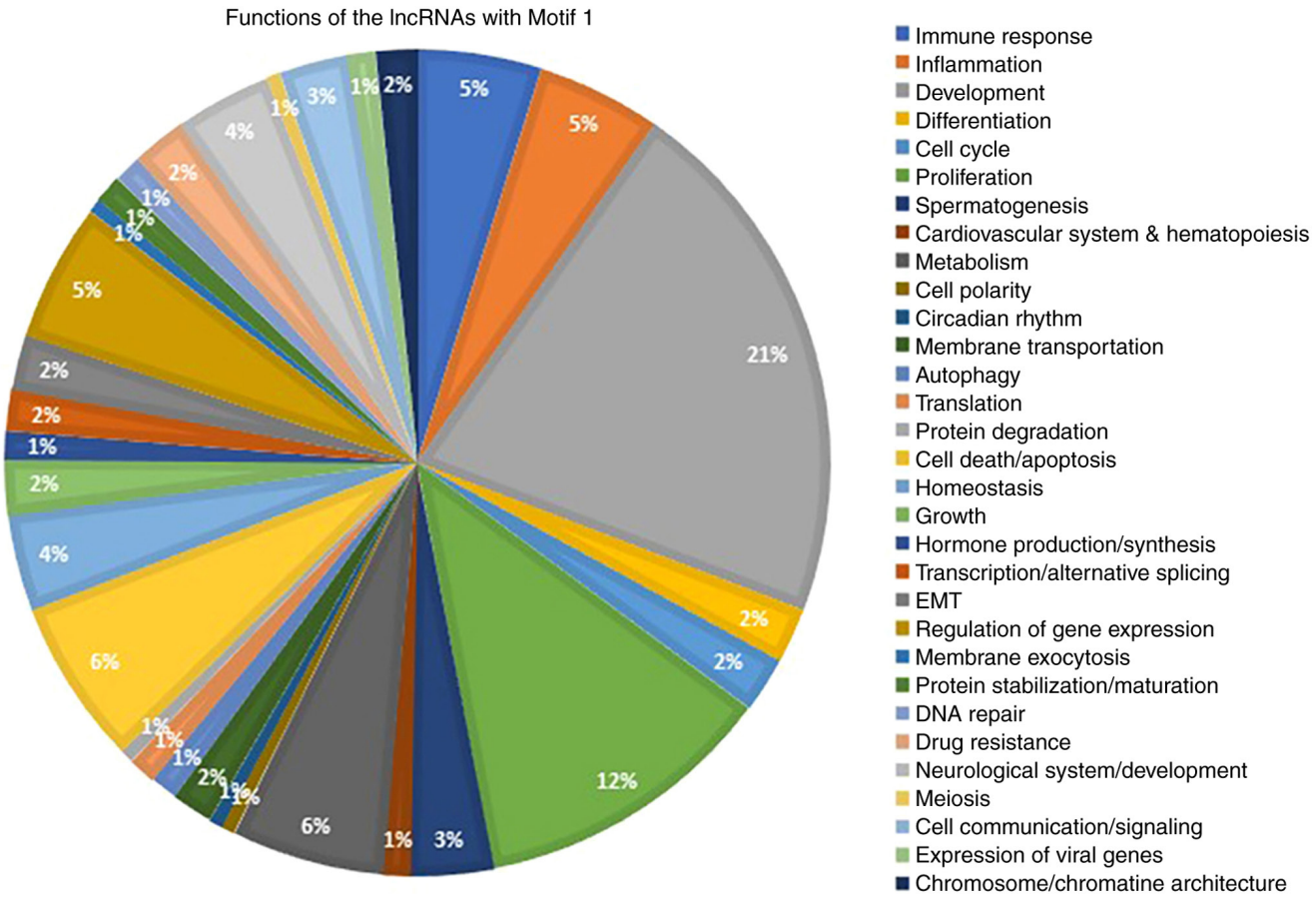

Figure S26. The biological pathways in which the lncRNAs that contain the motif 2 participate and have a regulatory function, according to GeneCards (https://www.genecards.org/) and NCBI Gene (https://www.ncbi.nlm.nih.gov/gene/) databases.

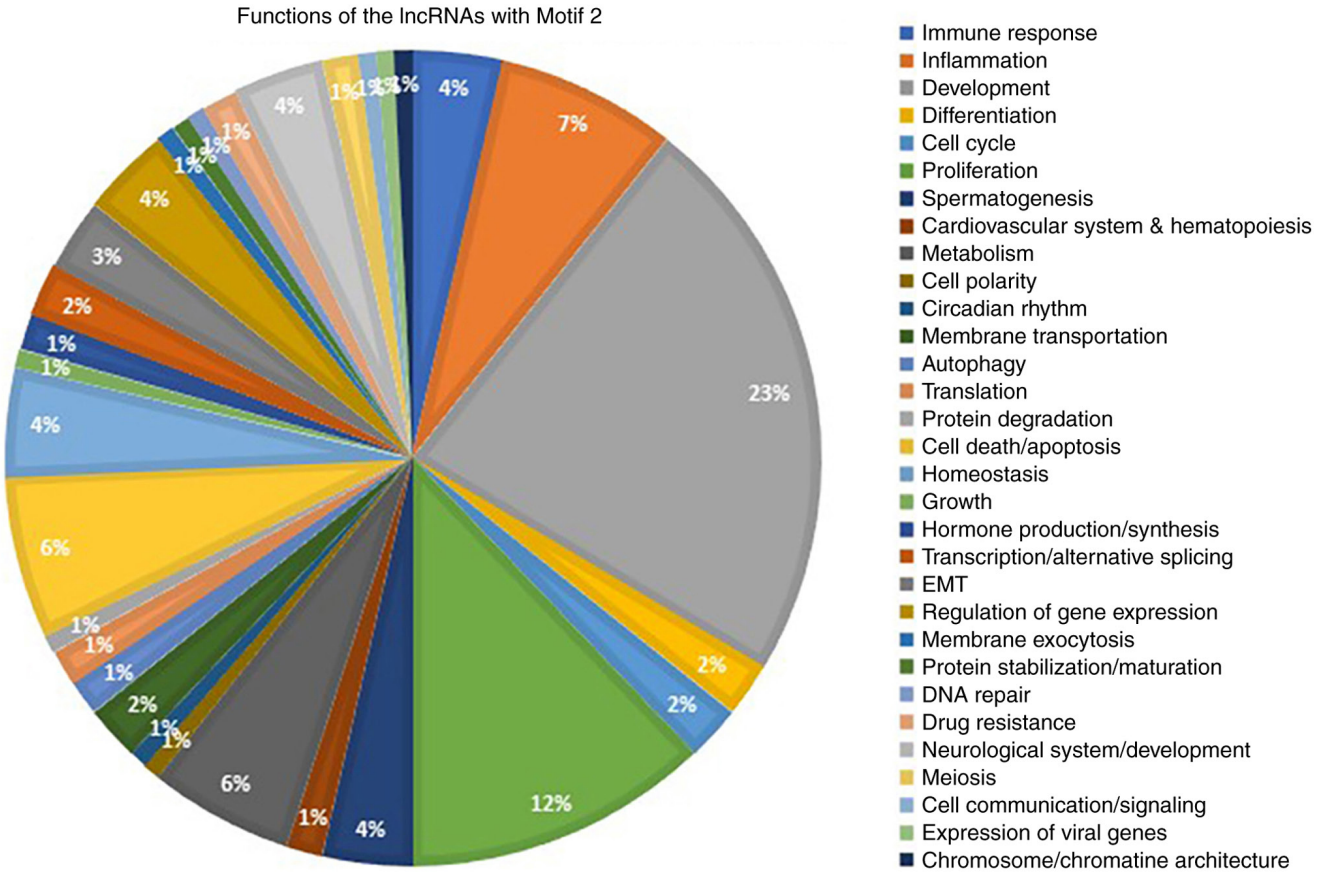

Figure S27. The biological pathways in which the lncRNAs that contain the motif 3 participate and have a regulatory function, according to GeneCards (https://www.genecards.org/) and NCBI Gene (https://www.ncbi.nlm.nih.gov/gene/) databases.

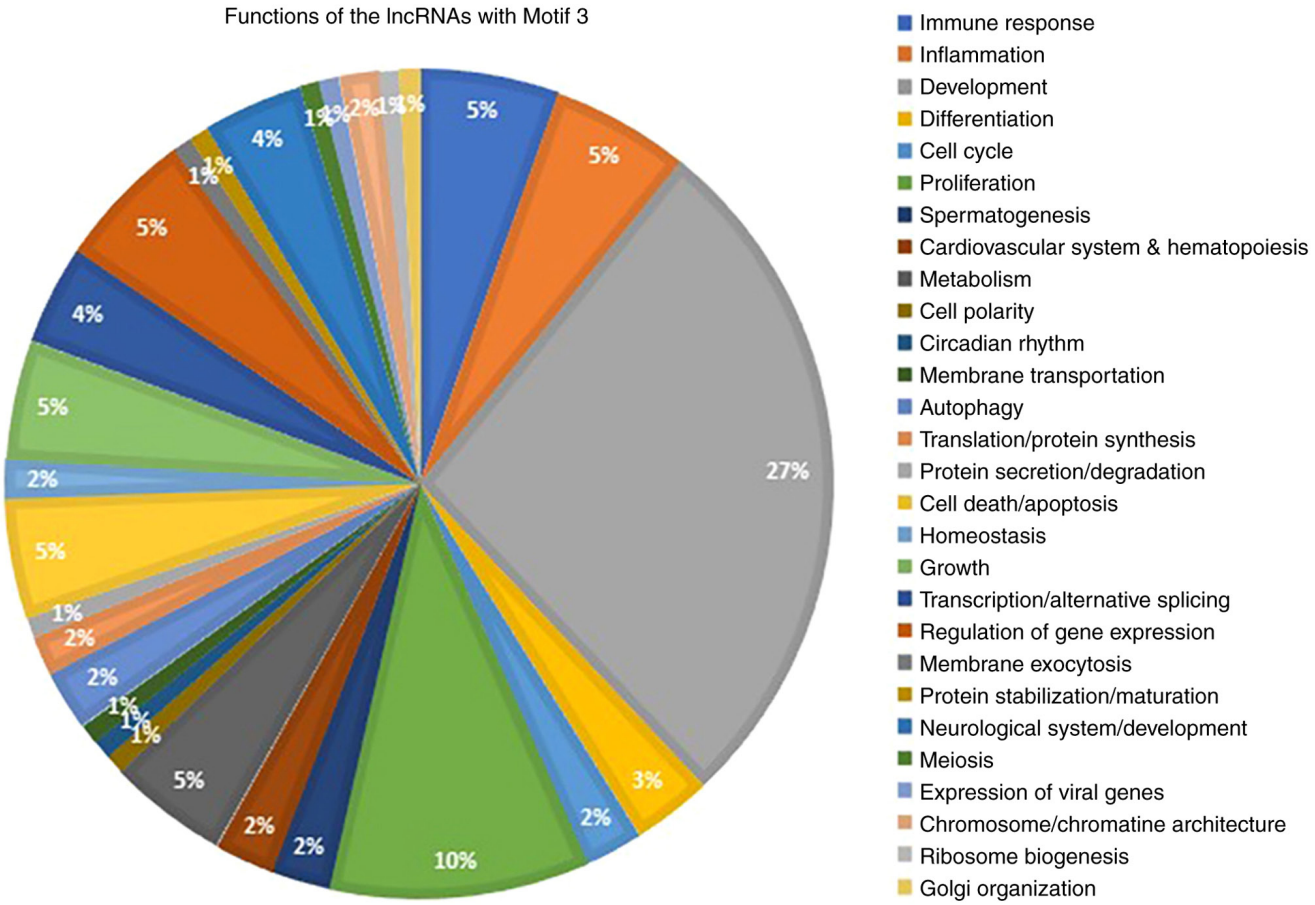

Figure S28. The biological pathways in which the lncRNAs that contain the motif 4 participate and have a regulatory function, according to GeneCards (https://www.genecards.org/) and NCBI Gene (https://www.ncbi.nlm.nih.gov/gene/) databases.

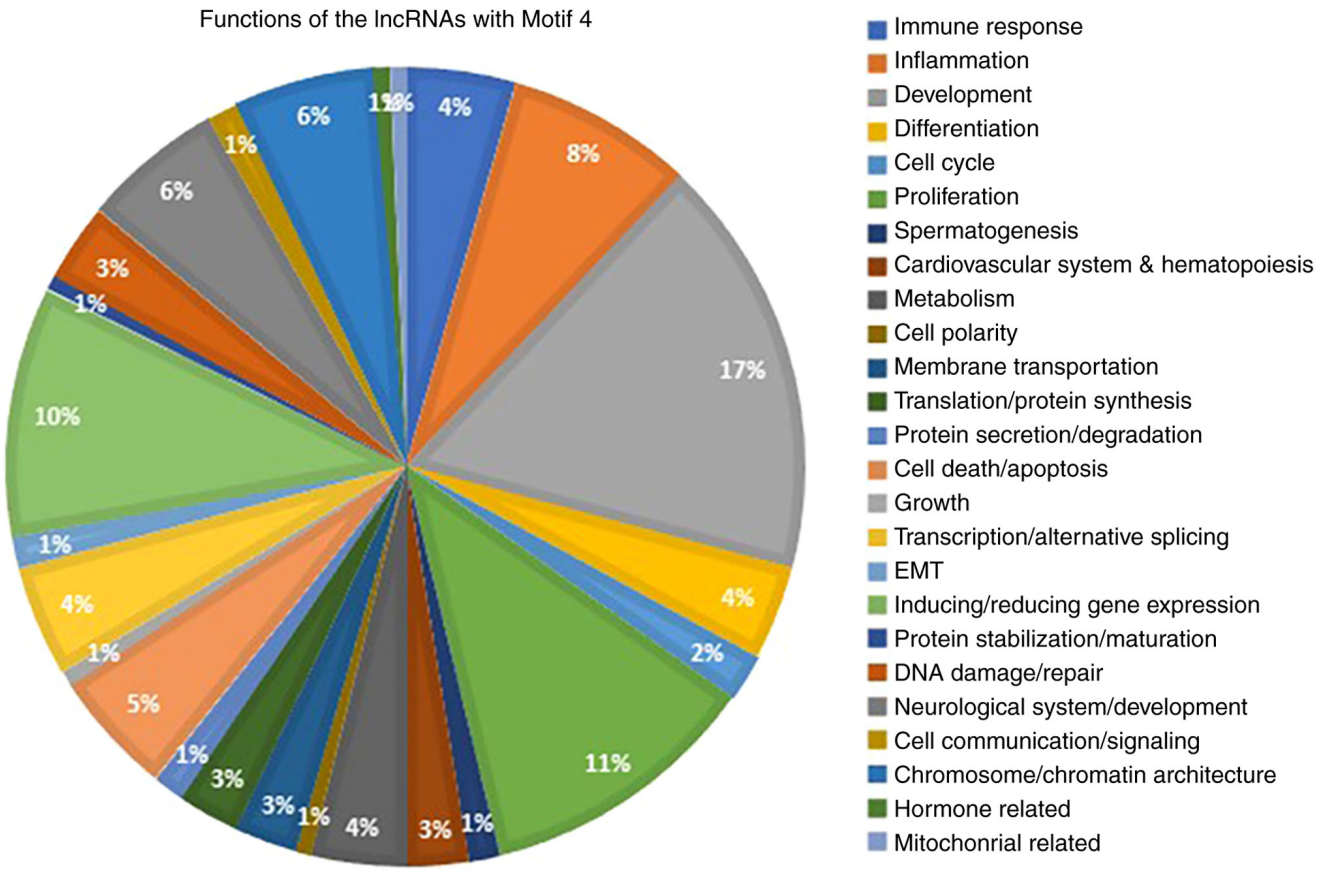

Figure S29. The biological pathways in which the lncRNAs that contain the motif 5 participate and have a regulatory function, according to GeneCards (https://www.genecards.org/) and NCBI Gene (https://www.ncbi.nlm.nih.gov/gene/) databases.

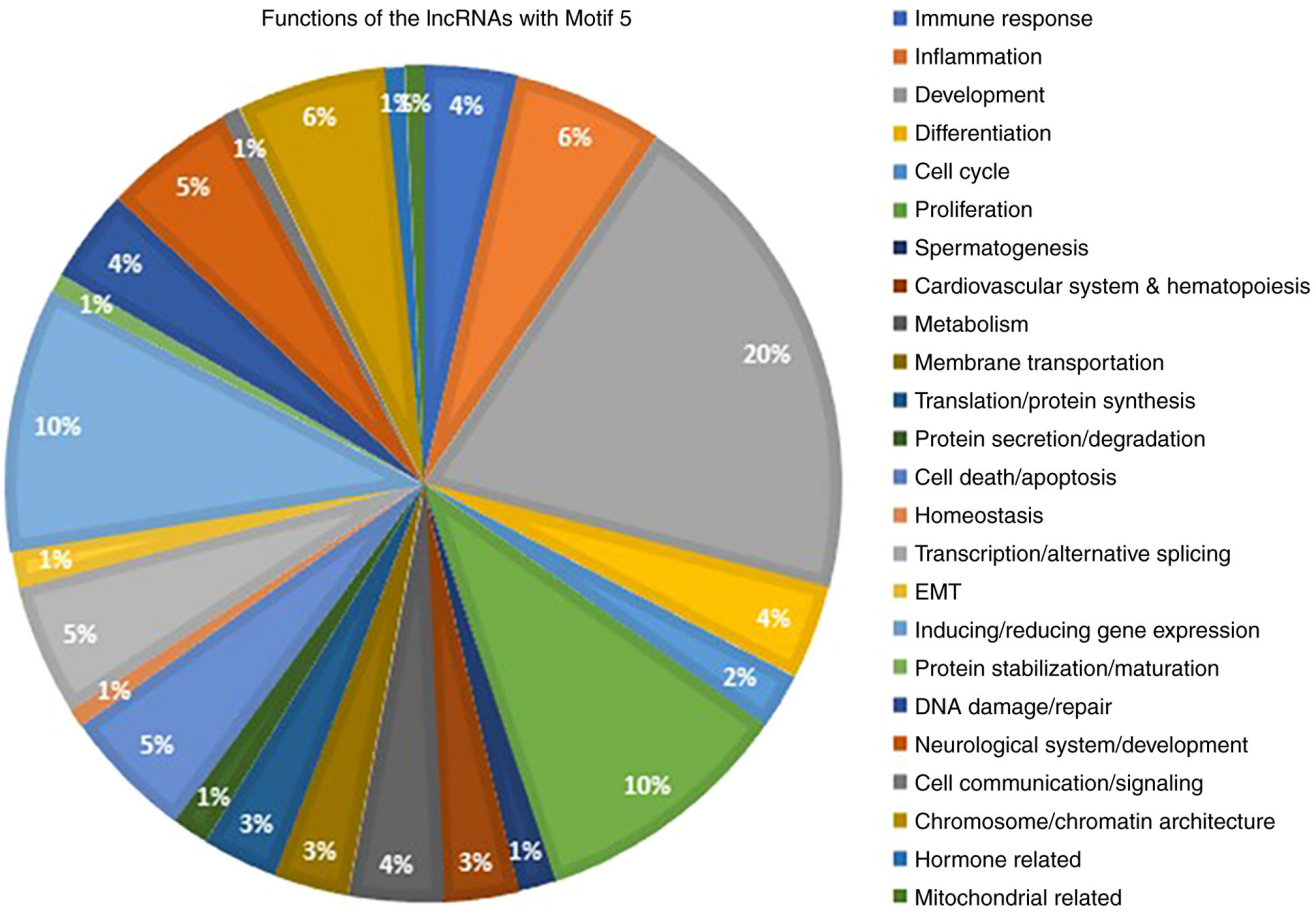

Figure S30. The biological pathways in which the lncRNAs that contain the motif 6 participate and have a regulatory function, according to GeneCards (https://www.genecards.org/) and NCBI Gene (https://www.ncbi.nlm.nih.gov/gene/) databases.