

Cell biology

[Science](#), [Biology](#)



30 October 2006 In Eukaryotes, RNA polymerase I II makes RNAs that become mRNAs. RNA polymerase II

2. The start signal for RNA synthesis is the same / different as the start signal for protein synthesis.

same

3. Ribosomes have 3 / 4 specialized binding sites for RNA (other than rRNA).

4

4. In Eukaryotes, the initiator tRNA (Met-tRNA) is loaded onto the small ribosome before / after the ribosome binds to the promoter.

after

5. Eukaryotic /Prokaryotic primary transcript RNA is modified to create mRNA by capping, polyadenylation, and splicing.

Eukaryotic

6. Prokaryotic mRNA is monocistronic / polycistronic.

polycistronic

7. Genes are found on only one / both strand(s) of the DNA.

only one

8. Genes on DNA do / do not overlap.

do

9. A T to G mutation in the TATA box in a prokaryotic promoter would increase / decrease the binding of RNA polymerase

decrease

10. An A to G mutation of the critical A within an intron splicing sequence would increase / inhibit removal of the intron sequence.

increase

11. Inhibition of polyadenylation would increase / decrease mRNA export from the nucleus.

decrease

12. A mutation in a UAC to a UAU would / would not affect the amino acid sequence.

would not

13. A mutation in a UAC to a UAG would / would not affect the amino acid sequence.

would

14. A mutation in the 5' untranslated sequence of an mRNA that changes a AAG to an AUG would / would not affect the amino acid sequence.

would

15. Scientists think that the first forms of life were RNA based. What are the two characteristics of RNA that make this possible?

RNA has the ability to act as both genes and enzymes. Furthermore, RNA can be transcribed into DNA, in reverse of the normal process of transcription.