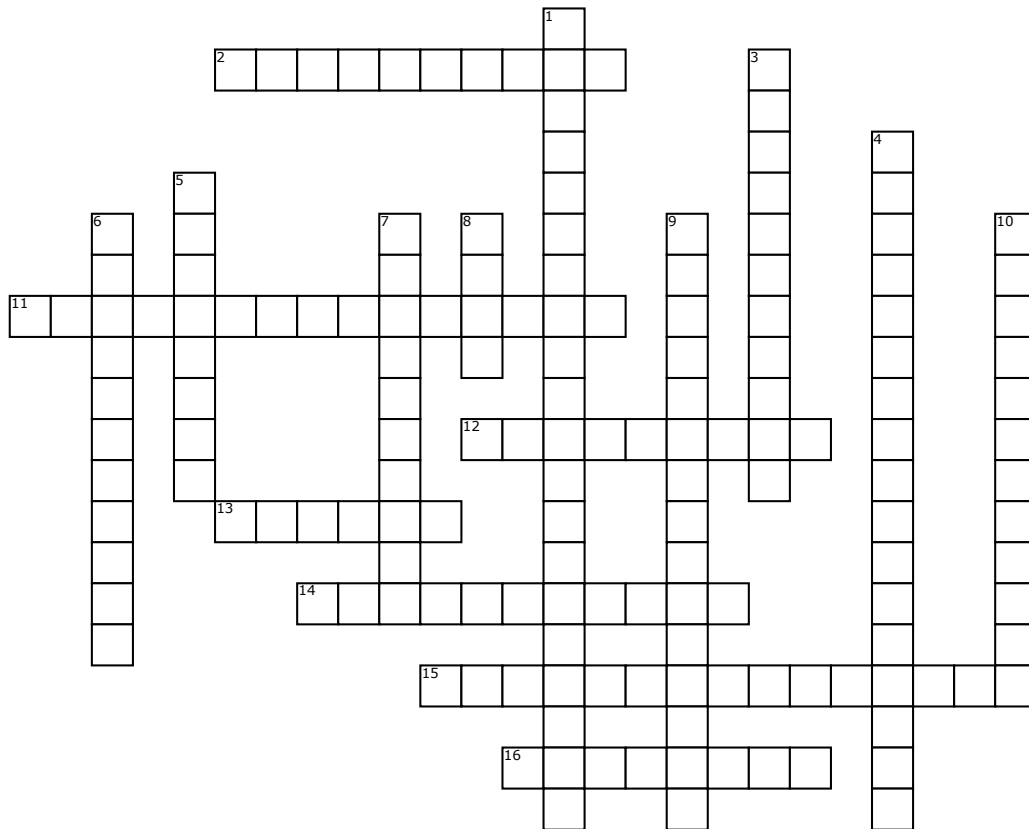


Gene Regulation



Across

2. Binds to DNA and stimulates gene transcription.

11. Eukaryotic chromatin that remains highly compacted during interphase and is not usually transcribed.

12. Compound in degradation of defective RNA molecule and superfluous proteins.

13. Cluster of genes whose products function in a common pathway.

14. Describes a reaction that introduces an acetyl functional group into a chemical compound.

15. Small protein with a high proportion of positively charged amino acid that binds to the negatively charged DNA.

16. Binds RNA polymerase to start transcribing RNA.

Down

1. Regulatory protein that binds to DNA and affects transcription of specific genes.

3. Less condensed form of Eukaryotic chromatin and is available for transcription.

4. Repressible if excess quantities of the end product in the path leads to the end of transcription of the gene encoding enzymes on the pathway.

5. Binding site of repressor.

6. Methyl groups are added to the DNA, can change activity of DNA segments without changing the sequence.

7. Breaks down proteins that have been tagged by ubiquitin.

8. Blocks transcription and is a small single stranded RNA molecule made from long, linear, double stranded RNA molecule.

9. Regulatory protein is normally bound to operator that prevents transcription of genes on the operon.

10. Splices RNA by cutting out introns and joining two adjacent exons.

Word Bank

- | | | | |
|--------------------|-----------------|-----------------------|------------------|
| Operator | Ubiquitin | Inducible Operon | Promoter |
| Repressible Operon | RNAi | Euchromatin | Proteasome |
| Acetylation | Heterochromatin | Operon | Activators |
| Spliceosomes | Methylation | Transcription Factors | Histone Proteins |