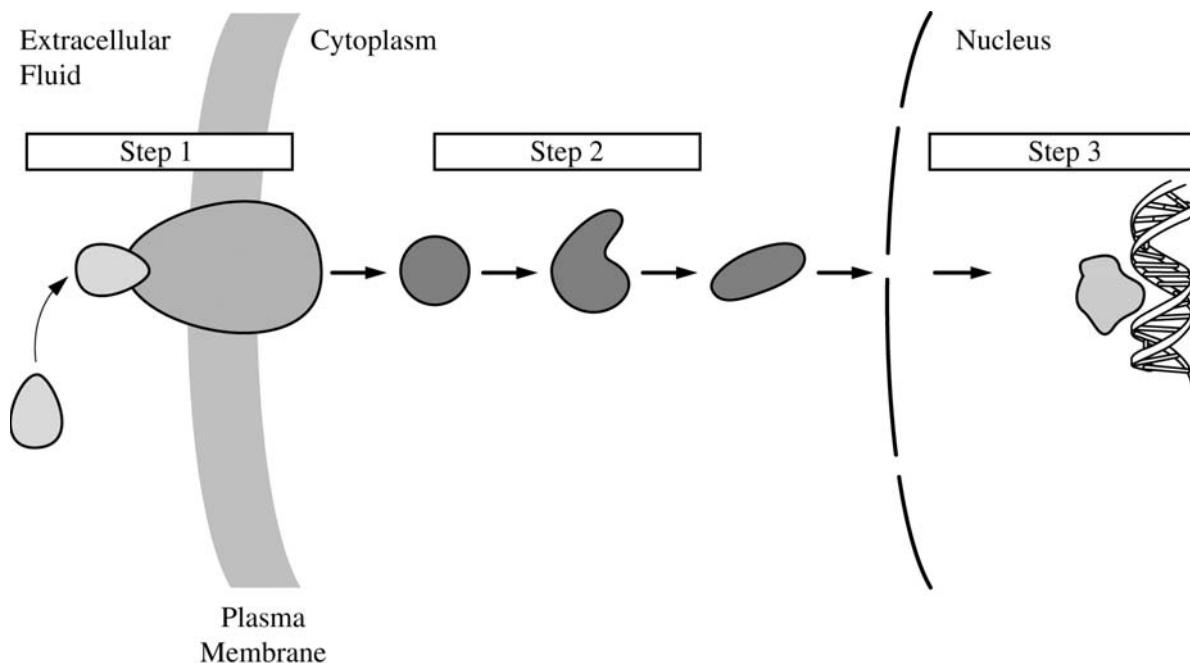


**2013 AP® BIOLOGY FREE-RESPONSE QUESTIONS**



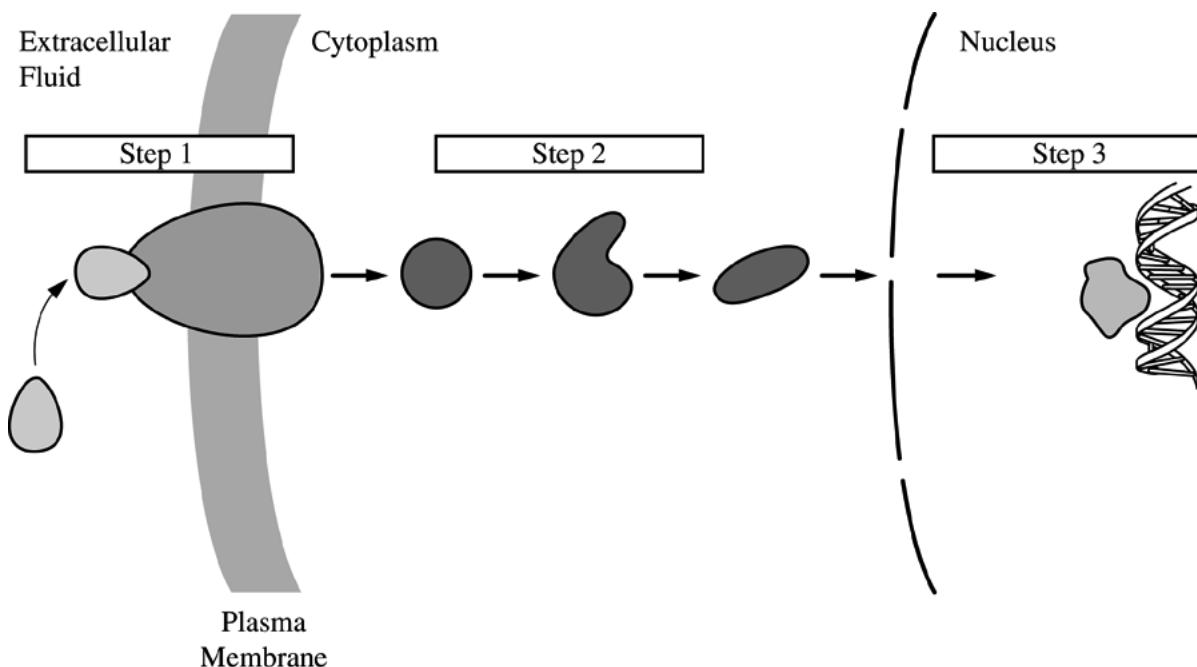
8. The figure above represents a generalized hormone-signaling pathway. Briefly **explain** the role of each numbered step in regulating target gene expression.

**STOP**

**END OF EXAM**

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**Question 8**



The figure above represents a generalized hormone-signaling pathway. Briefly **explain** the role of each numbered step in regulating target gene expression. (**3 points maximum**)

- Step 1 = hormone/ligand binding to receptor to initiate/trigger/induce signaling OR signal reception
- Step 2 = an intracellular cascade that transduces/amplifies/transfers the signal from plasma membrane to nucleus (or other cellular effectors)
- Step 3 = transcription/expression of target genes is stimulated/repressed