

Assessment Questions

1. Describe the role of restriction enzymes in the process of transformation.

2. The restriction enzyme BamHI cuts DNA between the two Gs when it encounters the base sequence.



Mark the recognition sites on the segment of DNA when the restriction enzyme BamHI is used.

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T A C G G A T C C T A G G G C A T A G C T C A G G A T C C C G T C A A T G G G G A T C C C
A T G C C T A G G A T C C C G T A T C G A G T C C T A G G G C A G T T A C C C C T A G G G
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3. Describe how bacteria can be made to produce human insulin.

4. Antigens are proteins that illicit an immune response from the human body. Some vaccines contain these proteins so the body can provide immunity from the pathogen, such as bacteria that harbor these harmful antigens. What might be some roles for bacteria that would benefit humans in terms of antigen production?

5. Do you think recombinant organisms could also pose a threat to a population or ecosystem? Explain.