

Lipopolysaccharide

Consult the diagram of *E. coli* K-12 lipopolysaccharide on the reverse. Within this structure, find and circle the group mentioned, or answer the question:

1. an octose
2. a heptose
3. a ketose
4. two deoxy sugars
5. a pair of sugars linked 2 → 4
6. a pair of sugars linked 1 → 3
7. an amino sugar
8. an acetal
9. α -D-glucose (as if it were not part of the structure)
10. any oxidized sugars
11. any reducing sugars
12. What is the charge on this molecule at physiological pH?
13. Which part of this molecule would be expected to dissolve in a lipid bilayer? Explain specifically why– what are the structural features that make this possible?

E. coli K-12 Lipopolysaccharide

