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- [54] ISOTOPE AND ASSAY FOR GLYCOLYSIS AND THE PENTOSE PHOSPHATE PATHWAY
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- [58] Field of Search 435/72, 105, 183, 190, 435/194, 14, 15

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[57] ABSTRACT

An isotopically substituted molecule D-(1,6-¹³C₂,6,6-²H₂)glucose and method of use is provided for measuring the relative activities of glycolysis and the pentose phosphate pathway (PPP). By using the isotope, labeled in the C1 and C6 positions, of the present invention, a single incubation of cells provides lactate methyl groups derived from the C1 and C6 positions of the labeled isotope, which are distinguishable by gas chromatography/mass spectrometry (GC/MS). When combined with standard microdialysis techniques, the isotope and method of the present invention may also be used to monitor in vivo glycolysis and the PPP.

9 Claims, 4 Drawing Sheets

