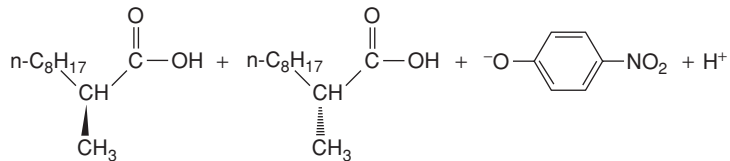
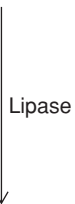


Racemic *p*-nitrophenyl ester



(*S*)-fatty acid

(*R*)-fatty acid

*p*-nitrophenolate anion

FIGURE 11.9

Assay for the enantioselectivity of a lipase by measuring the hydrolytic kinetic resolution of a racemic mixture of *p*-nitrophenyl esters. Enzyme-catalyzed hydrolysis of the racemic substrate yields two enantiomeric fatty acids and a *p*-nitrophenylate anion that absorbs strongly at 405 nm. To measure the enantioselectivity of each lipase variant, the assay was performed by comparing separately and pairwise the rate of *p*-nitrophenylate formation from the (*S*)- and (*R*)-substrates.