

Dynamic aspects of affinity labelling as revealed by alkylation and phosphorylation of pancreatic ribonuclease with reactive deoxyribodinucleotide derivatives

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Affinity labelling of pancreatic RNase with 4-(*N*-2-chloroethyl-*N*-methylamino)benzylamide and (*N* → *P*) *N*-methylimidazolide of d(pTpA) results in the formation of monomodified enzyme derivatives retaining partially enzymatic activity. These data together with some cases described in the literature are considered as suggesting the dynamic nature of the enzyme-reagent complex represented by a set of states differing in the probability of intra-complex reaction. In particular, modification may proceed in a low probability state with an especially favorable mutual orientation of reagent and some protein residue remote from the active site of the enzyme resulting in the removal of the covalently attached reagent moiety from the active center.

Affinity labeling Biopolymer dynamics Reactive dinucleotide derivative Pancreatic RNase