

ROLE OF HISTIDINE163 IN THE CO-PROTEASE ACTIVITY OF RECA VERIFIED BY CHEMICAL MODIFICATION, FOLLOWED BY MALDI MASS SPECTROMETRY

Using chemical modification, site directed mutagenesis data and model building based on RecA crystal structures, it was shown earlier that His163, Lys177 and Lys232 in RecA are crucial residues involved in λ cI repressor cleavage by combining with the catalytic Ser149 and Lys192 in the repressor. However, it is only now that it is experimentally verified by MALDI mass spectrometry that His163, and not His97 of RecA, gets chemically modified by diethyl pyrocarbonate in the absence of ATP or ATP γ S.

Keywords: multifunctional bacterial protein RecA; co-protease activity ; SOS response ; parallel mechanisms

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