

Despite the predominantly divergent nature of most sequence evolution, parallel and convergent events often occur; these usually appear to be scattered randomly across species²² and only rarely have functional explanations for specific replacements been proposed²³. Moreover, when selection for a new protein function is imposed on bacterial populations in the laboratory, the same way of solving the problem is sometimes encountered²⁴. So, there may be a limited number of ways of converting a conventional mammalian lysozyme into one that would function well in the stomach fluid of a foregut fermenter. To understand why langur lysozyme has gained sequence similarity to cow stomach lysozyme, studies must be made of the functional consequences of the homoplastic replacements identified by our phylogenetic analysis. For evaluation of some of the possible consequences, see ref. 27.

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ERRATUM

Location of the ATPase site of myosin determined by three-dimensional electron microscopy

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