Dokumenttyp: Zeitschriftenaufsatz

Autor(en) des Beitrags: Schlag, E. W.; Sheu, Sheh-Yi; Selzle, H. L.; Yang, Dah-Yen

Titel des Beitrags: Interaction of adjacent amino acids

Abstract:

Ramachandran plots display the dihedral angles of a single protein residue. We propose a crossed torsion angle plot called SSY-plot between two neighboring amino acids and demonstrate that a special coherence motion can exist between some very special amino acid pairs leading to spontaneous unusual structures. A 6mer was extd. from a BBA polypeptide chain which in this plot shows two diagonal domains for the Ser-Arg pair after some induction time. Other amino acid pairs in general do not show this kind of split domain. This shows that a special pair is required for stabilizing two distinct native structures in protein folding. We suggest that the existence of these two domains corresponds to a bifurcation between two different protein structures and that the special pair is the key to producing these two structures. These two different structures are produced spontaneously without an external agent. [on SciFinder(R)]

Stichworte: Conformation (interaction of adjacent amino acids in proteins) Amino acids Proteins Role: BSU (Biological study, unclassified), PRP (Properties), BIOL (Biological study) (interaction of adjacent amino acids in proteins) Conformation (protein interaction of adjacent amino acids in proteins) amino acid conformation protein

Kongressstitel: CAN 146:374394 6-3 General Biochemistry Institute fur Physikalische und Theoretische Chemie, TU-Muenchen, Garching,