

Abstract Submitted
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Experimental studies of protein binding affinity by different methods. DEBANGSHU SAMANTA, Institute of Molecular Biophysics, Department of Physics, Florida State University, DANIEL SPENCER, Institute of Molecular Biophysics, Florida State University, HUAN-XIANG ZHOU, Institute of Molecular Biophysics, Department of Physics, Florida State University — Protein-protein binding is central to most protein functions; convenient assays of binding affinity are thus invaluable for elucidating mechanisms of biological processes. We are carrying out different assays on the binding of the 12 kD FK506-binding protein (FKBP12) with target peptides. The methods include affinity chromatography, isothermal titration calorimetry, and fluorescence spectroscopy. The goal is to identify a convenient protocol for identifying peptides that form part of the binding site on the target protein of FKBP12. FKBP12 is a multiple-function protein. For example, it regulates the ryanodine receptor, a calcium release channel implicated in excitation-contraction coupling. Our approach is expected to have wide applicability in identifying target peptides.

Debangshu Samanta
Institute of Molecular Biophysics, Department of Physics
Florida State University

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