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Interaction of SecB with soluble SecA

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Abstract

The preprotein binding molecular chaperone SecB functions by preventing the premature folding of the preprotein in the cytosol, and targeting it to the peripheral subunit SecA of the translocase at the cytoplasmic membrane. The nature of the interaction of SecB with soluble SecA was studied by fluorescence anisotropy spectroscopy of Ru(bpy)2(dcbpy)-labeled SecA in the presence of increasing concentrations of SecB. A more than 50-fold difference in affinity for the cytosolic SecA compared to translocase associated SecA seems to prevent unproductive binding of SecB to the cytosolic SecA and stresses its targeting function.