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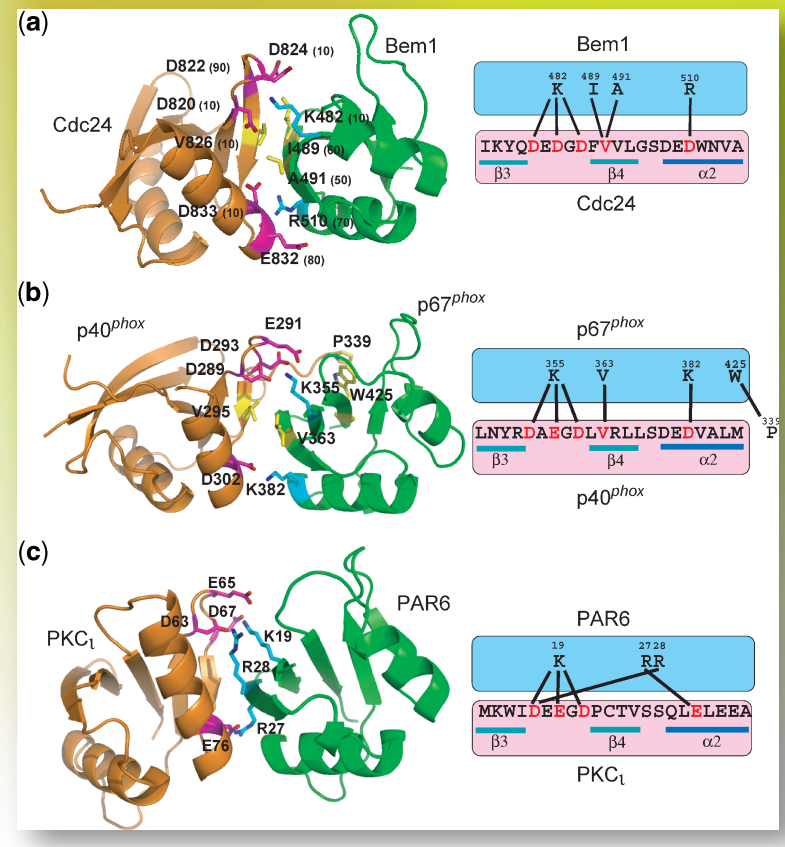

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COVER: The PB1 domain is a modular domain mediating protein-protein interaction in a variety of biological events through homo- or hetero-dimerization. The PB1 domain is classified into two types; type I and type II. The OPCA motif forming an acidic surface of the type I PB1 domain specifically interacts with the conserved lysine residue of the type II PB1 domain. The figure shows a structural comparison among the PB1-PB1 heterodimers of Bem1/Cdc24 (a), $p67^{phox}$/$p40^{phox}$ (b), and PAR6/PKCι (c). The structure in the left panel shows the residues involved in the interface. Basic, acidic, and hydrophobic residues are colored blue, red, and yellow, respectively. The right panel shows an interaction diagram of the residues of the PB1 domain. Through the comparison with the PB1-PB1 heterodimers, it can be seen that conserved electrostatic properties are commonly used for PB1 dimerization, but hydrophobic interactions are important for cognate interaction in Bem1/Cdc24 PB1 heterodimer formation. [See Ogura *et al*., p. 317].