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Identification of a Protein that Interacts with Calcium-Binding Protein 3 (CBP3) in *Dictyostelium discoideum*

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In cells of the eukaryotic microorganism *Dictyostelium discoideum*, at least eight small, four-EF hand calcium-binding proteins respectively are expressed at specific stages during development. One of these proteins, calcium-binding protein 3 (CBP3), first appears just prior to cell aggregation and then maintains relatively constant levels throughout development. To determine the role of CBP3 during development, the protein was used as a bait in a yeast two-hybrid screen to reveal putative CBP3-interacting proteins. Of 7.0×10^6 independent transformants, one positive transformant carrying Actin8, which is the major component of the cellular microfilament system or actin cytoskeleton, was identified. The interaction of actin and CBP3 was monitored by SPR detection using a BIAcore optical biosensor. Thus CBP3 might function to help regulate the reorganization of *Dictyostelium* actin cytoskeleton during cell aggregation.