

**PROTEINS INTERACTING WITH THE *Irr1* PROTEIN INVOLVED IN  
COLONY FORMATION AND SISTER CHROMATID COHESION IN  
*SACCHAROMYCES CEREVISIAE***

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The protein encoded by the *S. cerevisiae* gene *IRR1* (*SCC3*) is an element of the complex responsible for establishing cohesion between sister chromatids during DNA replication and maintained until sister chromatids are separated during anaphase. A significantly decreased level of the *Irr1p* causes pleiotropic effects comprising irregularities in mating, sporulation and colony formation on solid supports, with retained growth in liquid media. Numerous features of the function of the cohesin complex are already well known, but many problems remain unsolved. We attempted to approach them by looking for spontaneous suppressors and proteins directly interacting with *Irr1p* in the 2-hybrid system. We isolated 5 dosage suppressors restoring the ability of *irr1<sup>-</sup>* mutants to form colonies. However, the suppression is only partial, and the mutants are still disturbed in the mating process. The 2-hybrid analysis led to the identification of the protein encoded by ORF *YHR156C*. This is an unknown protein sharing some similarities with the mammalian kinesin KIF3B. We found that this protein is localized in the nucleus. Preliminary experiments suggest that it may interact with the mitotic spindle. The second round of 2-hybrid assay, this time with *YHR156C* encoded protein as a bait, revealed interactions with proteins participating in splicing and DNA replication.