

Isolation and characterization of extrachromosomal double-stranded RNA elements from carotenogenic yeasts

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© Springer Science+Business Media, LLC, part of Springer Nature 2018. Double-stranded RNA (dsRNA) molecules are widely found in yeasts and filamentous fungi. It has been suggested that these molecules may play an important role in the evolution of eukaryote genomes and could be a valuable tool in yeast typing. The characterization of these extrachromosomal genetic elements is usually a laborious process, especially when trying to analyze a large number of samples. In this chapter, we describe a simple method to isolate dsRNA elements from yeasts using low amounts of starting material and their application to different *Xanthophyllomyces dendrorhous* strains and other psychrotolerant carotenogenic yeasts. Furthermore, the methodologies for enzymatic and hybridization characterizations and quantification of relative dsRNA abundance are detailed.