

Coenzyme Q (CoQ) is essential for mitochondrial respiration and as a cofactor for sulfide quinone reductase. *Schizosaccharomyces pombe* produces a human-type CoQ<sub>10</sub>. Here, we analyzed CoQ in other fission yeast species. *S. cryophilus* and *S. octosporus* produce CoQ<sub>9</sub>. *S. japonicus* produces low levels of CoQ<sub>10</sub>, although all necessary genes for CoQ synthesis have been identified in its genome. We expressed three genes (*dps1*, *dlp1*, and *ppt1*) for CoQ synthesis from *S. japonicus* in the corresponding *S. pombe* mutants, and confirmed that they were functional. *S. japonicus* had very low levels of oxygen consumption and was essentially respiration defective, probably due to mitochondrial dysfunction. *S. japonicus* grows well on minimal medium during anaerobic culture, indicating that it acquires sufficient energy by fermentation. *S. japonicus* produces comparable levels of ethanol under both normal and elevated temperature (42 °C) conditions, at which *S. pombe* is not able to grow.

*Schizosaccharomyces japonicus* and *Schizosaccharomyces pombe* are distinct in mitochondrial-related functions.