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***Neurospora crassa coq-1* and *coq-7* genes can complement
Saccharomyces cerevisiae coq1 and *coq7* mutants**

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Coenzyme Q (CoQ, ubiquinone) is a quinone derivative with a long isoprenoid side chain. CoQ is a lipid component that transports electrons in the respiratory chains located in the inner mitochondrial membrane of eukaryotes and the plasma membrane of prokaryotes, and also functions as an antioxidant. CoQ is essential in aerobic growth of *S. cerevisiae*. Its *coq* mutants, that is deficient ubiquinone biosynthesis fail to grow on non-fermentable carbon sources, such as glycerol. Two genes involved in ubiquinone biosynthesis of *N. crassa* were cloned and used for complementation test of *S. cerevisiae coq1* and *S. cerevisiae coq7* strains, respectively. The predicted amino acid sequences of both *N. crassa* COQ1 and COQ7 showed about 56% and 58% homology with those of *S. cerevisiae*. The growth rates of *S. cerevisiae coq1* and *coq7* mutants transformed with *N. crassa coq-1* and *coq-7* genes, respectively were restored to the wild-type level, The complemented *S. cerevisiae* strains are able to grow in medium containing glycerol as a sole carbon source, and showed less hypersensitivities in media supplemented with polyunsaturated fatty acids such as linoleic acid or linolenic acid.