Urk1p is a uridine kinasethat phosphorylates uridine into UMP and cytidine into CMP in the pyrimidine ribonucleotide salvage pathway. Urk1p can also phosphorylate deoxycytidine into dCMP in pyrimidine deoxyribonucleotide salvage. These two pathways provide pyrimidines required for nucleic acid synthesis, amino acid synthesis, and energy. URK1 is repressed in response to lithium chloride during growth on galactose. urk1 null mutants grow well on uridine and cytosine, but are unable to utilize cytidine, and are also resistant to 5-fluorocytidineand 5-fluorouridine. urh1 urk1 double mutants are unable to utilize uridine as the sole source of pyrimidines. Urk1p displays similarity to the rat myocardial uridine kinase.