

<b>Enzyme</b>	<b>Gene</b>	<b>Accession</b>	<b>Organism</b>	<b>Reference</b>	<b>Arabidopsis close homologue</b>
<b>Reductive pathway</b>					
Dihydropyrimidine dehydrogenase	<i>DPYD</i>	NM_214044	<i>Sus scrofa</i>	Yokota et al. 1994	At3g17810
Dihydropyrimidinase		At5g12200	<i>Arabidopsis thaliana</i>	Gojkovic et al. 2003	At5g12200
β-ureidopropionase		At5g64370	<i>Arabidopsis thaliana</i>	Walsh et al. 2001	At5g64370
β-alanine synthase		AAK60518	<i>Saccharomyces kluyveri</i>	Andersen B et al. 2008	At5g43600
<b>Oxidative pathway</b>					
Uracil dehydrogenase		no gene identified yet			
Barbiturase	<i>bar</i>	AJ320520	<i>Rhodococcus erythropolis</i>	Soong et al. 2002	none
Ureidomalonase		no gene identified yet			
<b>RUT pathway</b>					
Monoxygenase	<i>rutA</i>	YP_002555908	<i>Escherichia coli</i>	Loh et al. 2006	none
Isochorismatase (putative)	<i>rutB</i>	YP_002386513	<i>Escherichia coli</i>	Loh et al. 2006	none
Endoribonuclease	<i>rutC</i>	YP_002386512	<i>Escherichia coli</i>	Loh et al. 2006	none
Hydrolase (putative)	<i>rutD</i>	YP_002386511	<i>Escherichia coli</i>	Loh et al. 2006	none
Nitroreductase	<i>rutE</i>	YP_002386510	<i>Escherichia coli</i>	Loh et al. 2006	none
Flavin reductase	<i>rutF</i>	YP_002386509	<i>Escherichia coli</i>	Loh et al. 2006	none
Pyrimidine permease	<i>rutG</i>	YP_002555902	<i>Escherichia coli</i>	Loh et al. 2006	none
<b>URC pathway</b>					
Cyclohydrolase (putative)	<i>urc1</i>	AY154654	<i>Saccharomyces kluyveri</i>	Andersen et al. 2008	none
Transcription factor	<i>urc2</i>	AY154653	<i>Saccharomyces kluyveri</i>	Andersen et al. 2008	none
Urea amidohydrolase, urea carboxylase	<i>urc3+5</i>	DQ512718	<i>Saccharomyces kluyveri</i>	Andersen et al. 2008	partial homology to various carboxylases
unknown	<i>urc4</i>	DQ512719	<i>Saccharomyces kluyveri</i>	Andersen et al. 2008	none
Uracil phosphoribosyltransferase (UPRT)	<i>urc6</i>	DQ512720	<i>Saccharomyces kluyveri</i>	Andersen et al. 2008	6 different proteins with UPRT domain

**Table S6** Compilation of genes and enzymes involved in the different pathways of pyrimidine degradation in various organisms and putative homologues identified in the Arabidopsis genome.