**Conserved Genes:**

Q10P67:

Catalyzes the conversion of 4-hydroxy-tetrahydrodipicolinate (HTPA) to tetrahydrodipicolinate.

Q9XJ29:

Part of a heterotetrameric complex that catalyzes the two-step biosynthesis of anthranilate, an intermediate in the biosynthesis of L-tryptophan. In the first step, the glutamine-binding beta subunit of anthranilate synthase (AS) provides the glutamine amidotransferase activity which generates ammonia as a substrate that, along with chorismate, is used in the second step, catalyzed by the large alpha subunit of AS to produce anthranilate.

O64422:

Catalyzes the irreversible reaction from fructose-1,6-bisphosphate to fructose-6-phosphate and inorganic phosphate, to regenerate the primary CO2 acceptor molecule, ribulose-1,5-bisphosphate. Involved in the regulation of photosynthetic performance and sucrose synthesis

Q94GF1:

Part of a heterotetrameric complex that catalyzes the two-step biosynthesis of anthranilate, an intermediate in the biosynthesis of L-tryptophan. In the first step, the glutamine-binding beta subunit of anthranilate synthase (AS) provides the glutamine amidotransferase activity which generates ammonia as a substrate that, along with chorismate, is used in the second step, catalyzed by the large alpha subunit of AS to produce anthranilate.

Q6ERL4:

No well known function. Appears to work with B6 binding and divalent metals (Fe, Zn). In mitochondria specifically.

Q9XEA6:

Cysteine biosynthesis (S-containing amino acid metabolism).