Mus musculus  Enzyme: galactose-1-phosphate uridyl transferase

Summary:
In humans, mutations in the gene encoding galactose-1-phosphate uridyl transferase (GALT) cause classic galactosemia. The mouse model homozygous for the functional null allele of Galt gene cannot convert [14C]-galactose-1-phosphate to [14C]UDP galactose, which results in high levels of galactose-1-phosphate (and galactose as well). However, despite the inability of these mice to metabolize galactose via a classical Leloir pathway, they lack severe pathologies associated with galactosemia in humans, and are phenotypically normal [Leslie96].

Gene: Galt
Sequence Length: 379 AAs

GO Terms:
- Molecular Function: GO:0008108 - UDP-glucose:hexose-1-phosphate uridylyltransferase activity
- GO:0008270 - zinc ion binding
- GO:0016740 - transferase activity
- GO:0016779 - nucleotidyltransferase activity
- GO:0046872 - metal ion binding

MultiFun Terms: UNCLASSIFIED

Enzymatic reaction of: galactose-1-phosphate uridyl transferase
The reaction direction shown, that is, A + B <==> C + D versus C + D <==> A + B, is in accordance with the Enzyme Commission system.
Reversibility of this reaction is unspecified.

In Pathways:
- Leloir pathway
- colanic acid building blocks biosynthesis
- UDP-galactose biosynthesis (salvage pathway from galactose using UDP-glucose)

References