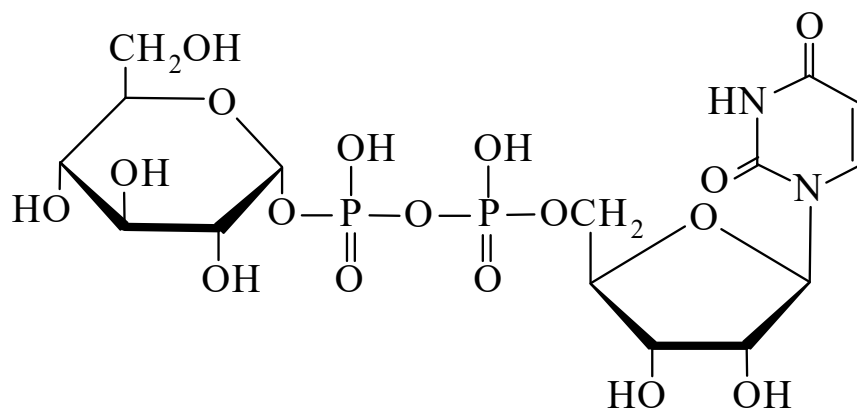




>>Entry Name: Uridine diphosphate glucose

Synonym(s): Uridine 5'-(trihydrogen diphosphate) mono- α -D-glucopyranosyl ester, 9Cl. UDPG



CAS Registry Number: 133-89-1

Molecular Formula: C₁₅H₂₄N₂O₁₇P₂

Molecular Weight: 566.305

Accurate Mass: 566.055027

Percentage Composition: C 31.81%; H 4.27%; N 4.95%; O 48.03%; P 10.94%

Biological Source: Biosynthetic prod. from the uridyl transferase catalysed reaction of UTP and glucose 1-phosphate

Use/Importance: Coenzyme of the galactose phosphate $\rightarrow$ glucose phosphate transformation *in vivo*

Other Data: $\lambda_{\max}$ 262 nm (ϵ 10 000) (pH 7)

>>Derivative: Di-Li salt

CAS Registry Number: 27518-86-1

Physical Description: Hexahydrate

Optical Rotation: $[\alpha]_D^{22} +43.6$ (c, 0.34 in H₂O)

>>Derivative: Di-Na salt

CAS Registry Number: 28053-08-9

Physical Description: Powder + 2H₂O

Other Data: $\lambda_{\max}$ 262 nm (pH 2)

Fluka: 94335

>>Derivative: 6"-Carboxylic acid

Synonym(s): Uridine 5'-diphosphate glucuronic acid. UDP-glucuronic acid. UDP-GlcUA

CAS Registry Number: 2616-64-0

Extra CAS Registry Numbers(s): 63700-19-6

Molecular Formula: C₁₅H₂₂N₂O₁₈P₂

Molecular Weight: 580.289

Accurate Mass: 580.034292

Percentage Composition: C 31.05%; H 3.82%; N 4.83%; O 49.63%; P 10.68%

Use/Importance: Intermed. in glucuronide synth. in biol. systems

Physical Description: Pale yellow powder

References:

- Caputto, R. *et al.*, *J. Biol. Chem.*, 1950, **184**, 333, (*isol*)
Storey, I.D.E. *et al.*, *Biochem. J.*, 1955, **59**, 279-288, (*UDP-glucuronic acid*)
Moffatt, J.G. *et al.*, *J.A.C.S.*, 1958, **80**, 3756, (*synth*)
Michelson, A.M. *et al.*, *Biochemistry*, 1962, **1**, 1171-1174, (*UDP-glucuronic acid*)
Honjo, M. *et al.*, *Chem. Pharm. Bull.*, 1962, **10**, 225-231, (*UDP-glucuronic acid*)
Michelson, A.M., *The Chemistry of Nucleosides and Nucleotides*, Academic Press, N.Y., 1963, 153, (*rev*)
Ger. Pat., 1975, 2 452 467; *CA*, **83**, 59225u, (*cryst struct*)
Lee, C.-H. *et al.*, *Biochemistry*, 1976, **15**, 697-704, (*pmr, conformn*)
Evans, P.E. *et al.*, *FEBS Lett.*, 1979, **105**, 11-14, (*UDP-glucuronic acid, P-31 nmr*)
Sugawara, Y. *et al.*, *Acta Cryst. C*, 1984, **40**, 389, (*cryst struct*)
Simon, E.S. *et al.*, *Methods Enzymol.*, 1989, **179**, 275-287, (*UDP-glucuronic acid*)
Simon, E.S. *et al.*, *J.O.C.*, 1990, **55**, 1834-1841; 1991, **56**, 5603-5606, (*UDP-glucuronic acid*)
Toone, E.J. *et al.*, *J.O.C.*, 1991, **56**, 5603-5606, (*UDP-glucuronic acid, enzymic synth, pmr, cmr*)