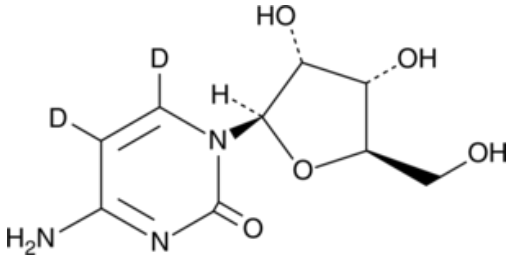
Product Data Sheet

Product Name: Cytidine-d2
Cat. No.: GC49526

Chemical Properties

Cas. No.	40632-25-5		
SMILES	O[C@H]1[C@@](N2C(N=C(C([2H])=C2[2H])N)=O)([H])O[C@@H]([C@H]1O)CO		
Formula	C9H11D2N3O5	M.Wt	245.2
Solubility	H_2O : ≥ 50 mg/mL (203.89 mM); DMSO : 50 mg/mL (203.89 mM; Need ultrasonic)	Storage	-20°C
General tips	For obtaining a higher solubility , please warm the tube at 37 °C and shake it in the ultrasonic bath for a while.Stock solution can be stored below -20°C for several months.		
Shipping Condition	Evaluation sample solution : ship with blue ice All other available size: ship with RT , or blue ice upon request.		

Structure



Background

Cytidine-d_2 is intended for use as an internal standard for the quantification of cytidine by GC- or LC-MS. Cytidine is a pyrimidine nucleoside composed of ribose and a cytosine base.[1] It forms complementary base pairs with the purine nucleoside guanosine in DNA and RNA. Cytidine is a precursor of uridine and can also be phosphorylated by uridine-cytidine kinase to form cytidine 5'-monophosphate .[2,1] It rescues inhibition of proliferation induced by knockdown of CTP synthase 1 in T cells when used at a concentration of 200 µM.[3]

1.Berg, J.M., Tymoczko, J.L., and Stryer, L.Nucleotide biosynthesisBiochemistry(2002) 2.Chabner, B.A., Johns, D.G., Coleman, C.N., et al.Purification and properties of cytidine deaminase from normal

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and leukemic granulocytesJ. Clin. Invest.53(3)922-931(1974) 3.Martin, E., Palmic, N., Sanquer, S., et al.CTP synthase 1 deficiency in humans reveals its central role in lymphocyte proliferationNature510(7504)288-292(2014)

Caution: Product has not been fully validated for medical applications. For research use only.
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