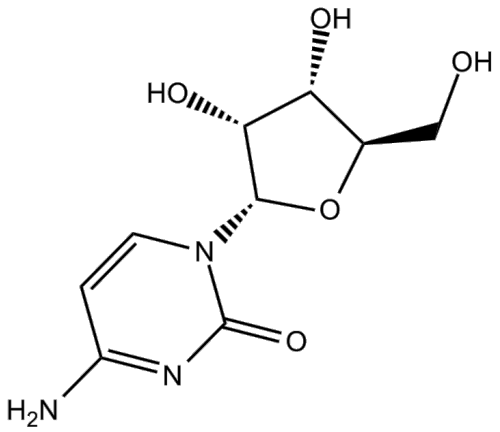
Product Data Sheet

Product Name: Cytidine
Cat. No.: GC13729

Chemical Properties

Cas. No.	65-46-3		
Chemical Name	4-amino-1-[(2R,3R,4S,5R)-3,4-dihydroxy-5-(hydroxymethyl)oxolan-2-yl]pyrimidin-2-one		
SMILES	C1=CN(C(=O)N=C1N)C2C(C(C(O2)CO)O)O		
Formula	$C_9H_{13}N_3O_5$	M.Wt	243.22
Solubility	≥ 11.85mg/mL in DMSO	Storage	Store at -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 is a nucleoside molecule that is formed when cytosine is attached to a ribose ring, cytidine is a component of RNA.Target: Nucleoside antimetabolite/analogCytidine is a nucleoside molecule that is formed when cytosine is attached to a ribose ring (also known as a ribofuranose) via a β-N1-glycosidic bond. Cytidine is a component of RNA. If cytosine is attached to a deoxyribose ring, it is known as a deoxycytidine. Dietary sources of cytidine include foods with high RNA (ribonucleic acid) content, such as organ meats, Brewer's yeast, as well as pyrimidine-rich foods such as beer. During

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digestion, RNA-rich foods are broken-down into ribosyl pyrimidines (cytidine and uridine), which are absorbed intact. In humans, dietary cytidine is converted into uridine, which is probably the compound behind cytidine's metabolic effects.There are a variety of cytidine analogs with potentially useful pharmacology. For example, KP-1461 is an anti-HIV agent that works as a viral mutagen, and zebularine exists in E. coli and is being examined for chemotherapy. Low doses of azacitidine and its analog decitabine have shown results against cancer through epigenetic demethylation.

References:

[1]. Jonas DA, et al. Safety considerations of DNA in food. Ann Nutr Metab. 2001;45(6):235-54.
[2]. Wurtman RJ, et al. Effect of oral CDP-choline on plasma choline and uridine levels in humans. Biochem Pharmacol. 2000 Oct 1;60(7):989-92.

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