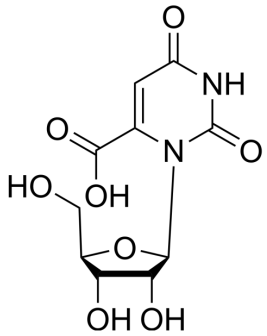
Orotidine

Cat. No.:	HY-113226
CAS No.:	314-50-1
Molecular Formula:	$C_{10}H_{12}N_2O_8$
Molecular Weight:	288.21
Target:	Endogenous Metabolite
Pathway:	Metabolic Enzyme/Protease
Storage:	Powder -20°C 3 years In solvent -80°C 6 months -20°C 1 month



BIOLOGICAL ACTIVITY

Description	Orotidine, a nucleotide, is an intermediate in pyrimidine nucleotide biosynthesis in RNA and DNA. Orotidine is mainly found in bacteria, fungi and plants[1][2].
IC_{50} & Target	Human Endogenous Metabolite
In Vitro	Extant de novo biosynthetic pathway uses Orotidine 50-monophosphate to synthesize the canonical pyrimidine nucleotides in RNA and DNA. In this context, Orotidine is the only nucleotide that is synthesized through a 'direct intermolecular nucleosidation' step, with an attack of the fully-preformed nucleobase (orotic acid) on the activated 5-phosphoribosyl-diphosphate as opposed to the purine nucleotides whose heterocyclic rings are constructed stepwise on the sugar[1]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

REFERENCES

[1]. Kim EK, et al. Synthesis of orotidine by intramolecular nucleosidation. Chem Commun (Camb). 2015 Apr 4;51(26):5618-21.

[2]. A M MICHELSON, et al. A new ribose nucleoside from Neurospora; "orotidine". Proc Natl Acad Sci U S A. 1951 Jul;37(7):396-9.

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