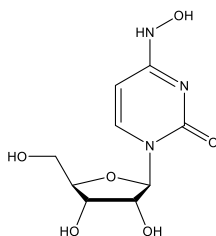


Catalog # 10-3970
N⁴-Hydroxycytidine

CAS# 3258-02-4

1-[(2R,3R,4S,5R)-3,4-Dihydroxy-5-(hydroxymethyl)oxolan-2-yl]-4-(hydroxyamino)pyrimidin-2-one; beta-D-N⁴-hydroxycytidine

Lot # FBA6221



N⁴-Hydroxycytidine was originally identified as a mutagen effecting AT to GC base-pair transitions.¹ It has also been found to have antiviral properties against a broad range of viruses including hepatitis C², norovirus³, Ebola virus⁴, Chikungunya virus⁵, influenza and respiratory syncytial viruses⁶, and importantly, coronaviruses.^{7,8} N⁴-hydroxycytidine is the active molecule in the antiviral pro-drug clinical candidate EIDD-2801.⁹

- 1) Janion and Glickman (1980), *N4-hydroxycytidine: a mutagen specific for AT to GC transitions*; *Mutat. Res.*, **72** 43
- 2) Stuyver *et al.* (2003), *Ribonucleotide analogue that blocks replication of bovine viral diarrhoea and hepatitis C viruses in culture*; *Antimicrob. Agents Chemother.*, **47** 244
- 3) Costantini *et al.* (2012), *Antiviral activity of nucleoside analogues against norovirus*; *Antivir. Ther.*, **17** 981
- 4) Reynard *et al.* (2015), *Identification of a New Ribonucleoside Inhibitor of Ebola Virus Replication*; *Viruses*, **7** 6233
- 5) Ehteshami *et al.* (2017), *Characterization of β-D-N4-Hydroxycytidine as a Novel Inhibitor of Chikungunya Virus*; *Antimicrob. Agents Chemother.*, **61** e02395-16
- 6) Yoon *et al.* (2018), *Orally efficacious broad-spectrum ribonucleoside analog inhibitor of influenza and respiratory syncytial viruses*; *Antimicrob. Agents Chemother.*, **62** e00766-18
- 7) Barnard *et al.* (2004), *Inhibition of severe acute respiratory syndrome-associated coronavirus (SARSCoV) by calpain inhibitors and beta-D-N4-hydroxycytidine*; *Antivir. Chem. Chemother.*, **15** 15
- 8) Pyrc *et al.* (2006), *Inhibition of human coronavirus NL63 infection at early stages of the replication cycle*; *Antimicrob. Agents Chemother.*, **50** 2000
- 9) Toots *et al.* (2019), *Characterization of orally efficacious influenza drug with high resistance barrier in ferrets and human airway epithelia*; *Sci. Transl. Med.*, **11** eaax5866

PHYSICAL DATA

Molecular Weight:	259.22
Molecular Formula:	C ₉ H ₁₃ N ₃ O ₆
Purity:	99% by HPLC
	NMR: (Conforms)
Solubility:	DMSO (25 mg/ml) or water (15 mg/ml with warming)
Physical Description:	White solid
Storage and Stability:	Store as supplied at -20°C for up to 1 year from the date of purchase. Solutions in DMSO or water may be stored at -20°C for up to 3 months.

Materials provided by Focus Biomolecules are for laboratory research use only and are not intended for human or veterinary applications.