

Product Name: Molnupiravir

Catalog No.: 7586

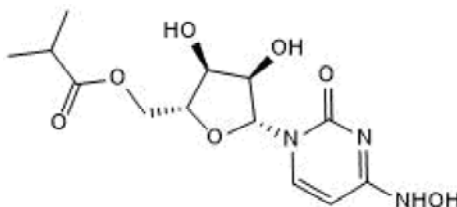
Batch No.: 1

CAS Number: 2492423-29-5

IUPAC Name: β -D-N⁴-hydroxycytidine-5¹-isopropyl ester

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: C₁₃H₁₉N₃O₇.
Batch Molecular Weight: 329.31
Physical Appearance: White solid
Solubility: DMSO to 100 mM
 water to 100 mM
Storage: Store at -20°C
Batch Molecular Structure:



2. ANALYTICAL DATA

HPLC: Shows 98.5% purity
¹H NMR: Consistent with structure
Mass Spectrum: Consistent with structure
Optical Rotation: [α]_D = -8.3 (Concentration = 3, Solvent = Methanol)
Microanalysis:

	Carbon	Hydrogen	Nitrogen
Theoretical	47.42	5.82	12.76
Found	47.35	5.7	12.57

Caution - Not Fully Tested • Research Use Only • Not For Human or Veterinary Use

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Description:

Molnupiravir is a broad-spectrum antiviral prodrug of the nucleoside analog β -D-N⁴-hydroxycytidine (NHC). Molnupiravir competes predominantly with CTP for incorporation; it induces lethal viral mutagenesis by increasing G to A and C to U transition mutations without inhibition of RNA synthesis in replicating coronaviruses, which prevents the development of viral resistance. In primary airway epithelial cell cultures, Molnupiravir dose-dependently inhibits SARS-CoV-2 infectious virus production; it also inhibits MERS-CoV and SARS-CoV with EC₅₀ values in the submicromolar range. In mice infected with SARS-CoV or MERS-CoV, Molnupiravir impr... Please see product specific page on www.tocris.com for full description.

Physical and Chemical Properties:

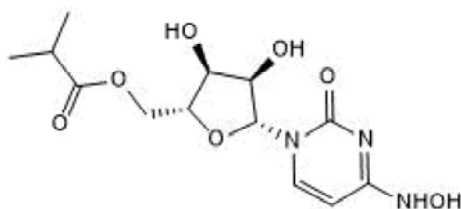
Batch Molecular Formula: C₁₃H₁₉N₃O₇.

Batch Molecular Weight: 329.31

Physical Appearance: White solid

Minimum Purity: ≥98%

Batch Molecular Structure:



References:

Gordon et al (2021) Molnupiravir promotes SARS-CoV-2 mutagenesis via the RNA template. *J.Biol.Chem.* **297** 100770. PMID: 33989635.

Sheahan et al (2020) An orally bioavailable broad-spectrum antiviral inhibits SARS-CoV-2 in human airway epithelial cell cultures and multiple coronaviruses in mice. *Sci.Transl.Med.* **12** eabb5883. PMID: 32253226.

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. PMID: 31645453.

Storage: Store at -20°C

Solubility & Usage Info:

DMSO to 100 mM

water to 100 mM

Stability and Solubility Advice:

Some solutions can be difficult to obtain and can be encouraged by rapid stirring, sonication or gentle warming (in a 45-60°C water bath).

Information concerning product stability, particularly in solution, has rarely been reported and in most cases we can only offer a general guide. Our standard recommendations are:

SOLIDS: Provided storage is as stated on the product label and the vial is kept tightly sealed, the product can be stored for up to 6 months from date of receipt.

SOLUTIONS: We recommend that stock solutions, once prepared, are stored aliquoted in tightly sealed vials at -20°C or below and used within 1 month. Wherever possible solutions should be made up and used on the same day.

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