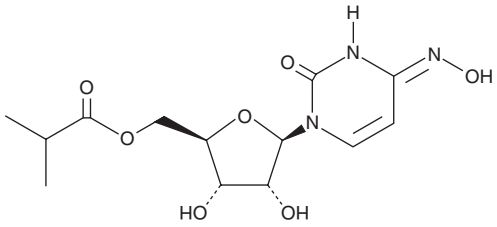
PRODUCT INFORMATION

Molnupiravir

Item No. 29586

CAS Registry No.:	2492423-29-5
Formal Name:	uridine, 4Z-oxime, 5′-(2-methylpropanoate)
Synonyms:	EIDD-2801, β-D-N^4-Hydroxycytidine-5′-isopropyl ester, MK-4482
MF:	$C_{13}H_{19}N_3O_7$
FW:	329.3
Purity:	≥98%
UV/Vis.:	λ_{max}: 235, 276 nm
Supplied as:	A crystalline solid
Storage:	-20°C
Stability:	≥4 years



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Laboratory Procedures

Molnupiravir is supplied as a crystalline solid. A stock solution may be made by dissolving molnupiravir in the solvent of choice, which should be purged with an inert gas. Molnupiravir is soluble in organic solvents such as DMSO and dimethyl formamide. The solubility of molnupiravir in these solvents is approximately 30 mg/ml.

Further dilutions of the stock solution into aqueous buffers or isotonic saline should be made prior to performing biological experiments. Ensure that the residual amount of organic solvent is insignificant, since organic solvents may have physiological effects at low concentrations. Organic solvent-free aqueous solutions of molnupiravir can be prepared by directly dissolving the crystalline solid in aqueous buffers. The solubility of molnupiravir in PBS, pH 7.2, is approximately 1 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

Molnupiravir is a prodrug form of the antiviral ribonucleoside analog EIDD-1931 (Item No. 9002958).[1,2] Molnupiravir (500 mg/kg) reduces body weight loss, lung hemorrhage, and lung viral titers, as well as improves pulmonary function in mouse models of severe acute respiratory syndrome coronavirus (SARS-CoV) or Middle East respiratory syndrome coronavirus (MERS-CoV) infection when administered prophylactically at 2 hours pre-infection or therapeutically at 12 hours post-infection.[1] It also reduces shed virus load and fever in ferret models of H1N1 or H3N2 influenza A virus infection when administered at a dose of 100 mg/kg twice per day.[2]

References

1. Sheahan, T.P., Sims, A.C., Zhou, S., *et al.* 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** (2020).
2. Toots, M., Yoon, J.-J., Cox, R.M., *et al.* Characterization of orally efficacious influenza drug with high resistance barrier in ferrets and human airway epithelia. *Sci. Transl. Med.* **11(515)**, eaax5866 (2019).

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