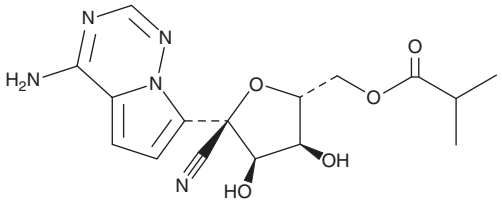
PRODUCT INFORMATION

Obeldesivir

Item No. 40404

CAS Registry No.:	2647441-36-7
Formal Name:	2-C-(4-aminopyrrolo[2,1-f][1,2,4]triazin-7-yl)-2,5-anhydro-D-altrononitrile, 6-(2-methylpropanoate)
Synonyms:	ATV006, GS-5245
MF:	$C_{16}H_{19}N_5O_5$
FW:	361.4
Purity:	≥98%
Supplied as:	A 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

Obeldesivir is supplied as a solid. A stock solution may be made by dissolving the obeldesivir in the solvent of choice, which should be purged with an inert gas. Obeldesivir is soluble in DMSO. Obeldesivir is slightly soluble in methanol.

Obeldesivir is sparingly soluble in aqueous solutions. To enhance aqueous solubility, dilute the organic solvent solution into aqueous buffers or isotonic saline. If performing biological experiments, ensure the residual amount of organic solvent is insignificant, since organic solvents may have physiological effects at low concentrations. We do not recommend storing the aqueous solution for more than one day.

Description

Obeldesivir is an antiviral nucleoside analog and a prodrug form of GS-441524 (Item No. 30469).[1] It inhibits the replication of severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) and SARS-CoV-2 Beta, Gamma, or Omicron variants in infected Vero E6 cells (EC_{50}s = 1.36, 1.127, 0.349, and 0.106 µM, respectively) with a 50% cytotoxicity concentration (CC_{50}) value of 128 µM. Obeldesivir (250 or 500 mg/kg per day) reduces nucleocapsid guide RNA (gRNA) copy number and small-guide RNA (sgRNA) levels in the lungs of, and decreases lung damage in, a KI-hACE2 mouse model of SARS-CoV-2 infection. It reduces the levels of the spike glycoprotein (S protein), also known as the surface glycoprotein, in the lungs of, as well as decreases particle forming units (PFUs) in the lung tissues, reduces lung and spleen inflammation, and prevents viral infection-induced death in, a K18-hACE2 mouse model of SARS-CoV-2 infection when administered at doses of 100 or 250 mg/kg per day.

Reference

1. Cao, L., Li, Y., Yang, S., *et al.* The adenosine analog prodrug ATV006 is orally bioavailable and has preclinical efficacy against parental SARS-CoV-2 and variants. *Sci. Transl. Med.* **14(661)**, eabm7621 (2022).

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