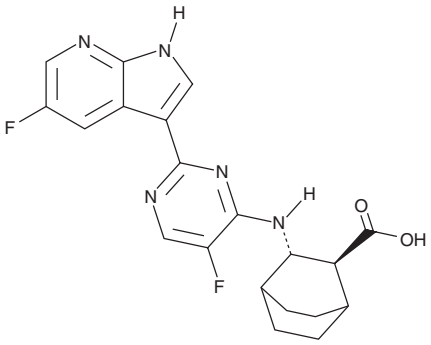
PRODUCT INFORMATION

Pimodivir

Item No. 29321

CAS Registry No.:	1629869-44-8
Formal Name:	(2S,3S)-3-[[5-fluoro-2-(5-fluoro-1H-pyrrolo[2,3-b]pyridin-3-yl)-4-pyrimidinyl]amino]-bicyclo[2.2.2]octane-2-carboxylic acid
Synonyms:	JNJ 63623872, JNJ 872, VX 787
MF:	$C_{20}H_{19}F_2N_5O_2$
FW:	399.4
Purity:	≥98%
UV/Vis.:	λ_{max}: 222, 263 nm
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

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

Description

Pimodivir is an inhibitor of influenza virus polymerase basic protein 2 (PB2; K_D = <0.003 µM).[1] It also binds to glycogen synthase kinase 3β (GSK3β; K_i = ~1.6 µM) and inhibits the activity of Axl and calcium/calmodulin-dependent protein kinase IIβ (CaMKIIβ) by greater than 50% in a panel of 65 human and rat kinases. Pimodivir decreases the replication of seven adamantine- and neuraminidase inhibitor-resistant strains of influenza virus A (EC_{50}s = <0.15-2.8 nM in a cell-based assay). It increases the antiviral activity of oseltamivir (Item No. 16070), zanamivir (Item No. 15123), and favipiravir (T-705; Item No. 23384) with 50% combination index (CI_{50}) values of 0.58, 0.64, and 0.89, respectively, in a cell-based assay.[2] Pimodivir increases survival in a mouse model of intranasal influenza A infection when administered at doses of 1, 3, and 10 mg/kg twice per day.

References

1. Clark, M.P., Ledeboer, M.W., Davies, I., *et al.* Discovery of a novel, first-in-class, orally bioavailable azaindole inhibitor (VX-787) of influenza PB2. *J. Med. Chem.* **57(15),** 6668-6678 (2014).
2. Byrn, R.A., Jones, S.M., Bennett, H.B., *et al.* Preclinical activity of VX-787, a first-in-class, orally bioavailable inhibitor of the influenza virus polymerase PB2 subunit. *Antimicrob. Agents Chemother.* **59(3),** 1569-1582 (2014).

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