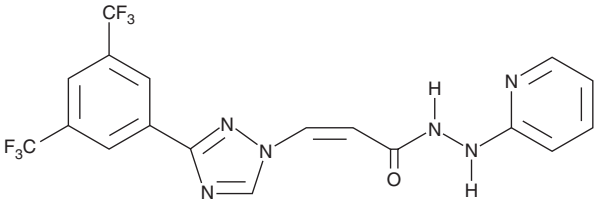
PRODUCT INFORMATION

Verdinexor

Item No. 26171

CAS Registry No.:	1392136-43-4
Formal Name:	(2Z)-3-[3-[3,5-*bis*(trifluoromethyl) phenyl]-1H-1,2,4-triazol-1-yl]-2-propenoic acid, 2-(2-pyridinyl)hydrazide
Synonym:	KPT-335
MF:	$C_{18}H_{12}F_6N_6O$
FW:	442.3
Purity:	≥98%
UV/Vis.:	λ_{max}: 232, 273 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

Verdinexor is supplied as a crystalline solid. A stock solution may be made by dissolving the verdinexor in the solvent of choice, which should be purged with an inert gas. Verdinexor is soluble in organic solvents such as ethanol and DMSO. The solubility of verdinexor in these solvents is approximately 11 and 88 mg/ml, respectively.

Description

Verdinexor is a reversible inhibitor of Exportin I (XPO1/CRM1) with anticancer and antiviral activities.[1-3] It inhibits the growth of OCI-Ly3, OCI-Ly10, and CLBL1 diffuse large B cell lymphoma (DLBCL) cells (IC_{50}s = 2.1, 41.8, and 8.5 nM, respectively).[1] Verdinexor inhibits XPO1/CRM1-mediated nuclear transport of respiratory syncytial virus (RSV) M protein when used at concentrations greater than 1 µM.[2] It reduces RSV A2 replication (IC_{50} = 0.96 µM) without affecting viability of A549 cells (CC_{50} = >38 µM). *In vivo*, verdinexor (20 mg/kg) reduces virus shedding, pulmonary TNF-α, IL-6, MCP-1, and IFN-γ expression, and leukocyte infiltration into the bronchoalveolar space in a mouse model of influenza A viral infection.[3] It also reduces viral burden in a ferret model of influenza A viral infection.

References

1. London, C.A., Bernabe, L.F., Barnard, S., *et al.* Preclinical evaluation of the novel, orally bioavailable Selective Inhibitor of Nuclear Export (SINE) KPT-335 in spontaneous canine cancer: Results of a phase I study. *PLoS One* **9(2)**, e8758 (2014).
2. Jorquera, P.A., Matthew, C., Pickens, J., *et al.* Verdinexor (KPT-335), a selective inhibitor of nuclear export, reduces RSV replication *in vitro*. *J. Virol.* **93(4)**, e01684-e01718 (2018).
3. Perwitasari, O., Johnson, S., Yan, X., *et al.* Antiviral efficacy of verdinexor *in vivo* in two animal models of influenza A virus infection. *PLoS One* **11(11)**, e0167221 (2016).

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