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Produktinformation

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- Zellkultur & Verbrauchsmaterial
- Diagnostik & molekulare Diagnostik
- Laborgeräte & Service

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Lieferung & Zahlungsart

siehe unsere Liefer- und Versandbedingungen

Zuschläge

- Mindermengenzuschlag
- Trockeneiszuschlag
- Gefahrgutzuschlag
- Expressversand

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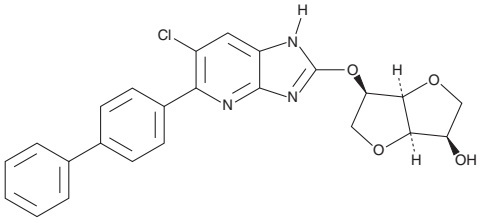
PRODUCT INFORMATION

MK-8722

Item No. 37578

CAS Registry No.:	1394371-71-1
Formal Name:	1,4:3,6-dianhydro-2-O-(5-[1,1′-biphenyl]-4-yl-6-chloro-3H-imidazo[4,5-b]pyridin-2-yl)-D-mannitol
MF:	$C_{24}H_{20}ClN_3O_4$
FW:	449.9
Purity:	≥95%
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

MK-8722 is supplied as a solid. A stock solution may be made by dissolving the MK-8722 in the solvent of choice, which should be purged with an inert gas. MK-8722 is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). The solubility of MK-8722 in DMSO and DMF is approximately 30 mg/ml. MK-8722 is slightly soluble in ethanol.

Description

MK-8722 is an activator of AMP-activated protein kinase (AMPK).[1] It activates Ampk and increases phosphorylated acetyl-CoA carboxylase 1 (Acc1) levels in primary mouse dorsal root ganglia (DRG) when used at concentrations of 0.1 and 10 µM. MK-8722 (20 and 50 µM) reduces the proliferation, colony formation, migration, and invasion of, and induces apoptosis in, PANC-1 and PaTu 8988 pancreatic cancer cells.[3] It induces cell cycle arrest at the G_2 phase in PANC-1 and PaTu 8988 cancer cells when used at a concentration of 50 µM. *In vivo*, MK-8722 (25 mg/kg per day) reduces tumor volume and weight in a PANC-1 mouse xenograft model. It decreases blood glucose levels in fasting and glucose-challenged mice in a mouse model of diabetes induced by a high-fat diet when administered at doses of 10 and 30 mg/kg.[2] MK-8722 (30 mg/kg) increases the paw withdrawal threshold in the von Frey test in mice.[1]

References

1. Inyang, K.E., Burton, M.D., Szabo-Pardi, T., *et al.* Indirect AMP-activated protein kinase activators prevent incision-induced hyperalgesia and block hyperalgesic priming, whereas positive allosteric modulators block only priming in mice. *J. Pharmacol. Exp. Ther.* **371(1),** 138-150 (2023).
2. Feng, D., Biftu, T., Romero, F.A., *et al.* Discovery of MK-8722: A systemic, direct pan-activator of AMP-activated protein kinase. *ACS Med. Chem. Lett.* **9(1),** 39-44 (2017).
3. Wang, C., Huang, B., Sun, L., *et al.* MK8722, an AMPK activator, inhibiting carcinoma proliferation, invasion and migration in human pancreatic cancer cells. *Biomed. Pharmacother.* **144,** 112325 (2021).

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