

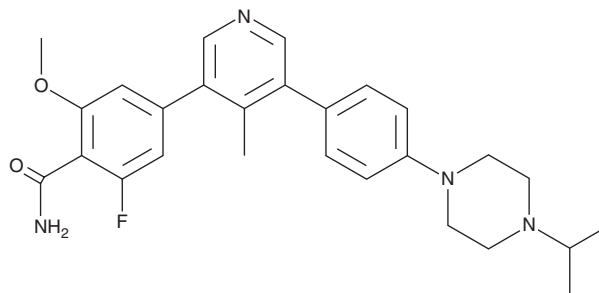
PRODUCT INFORMATION



M4K2234

Item No. 41169

CAS Registry No.: 2421141-51-5
Formal Name: 2-fluoro-6-methoxy-4-[4-methyl-5-[4-[4-(1-methylethyl)-1-piperazinyl]phenyl]-3-pyridinyl]-benzamide
MF: C₂₇H₃₁FN₄O₂
FW: 462.6
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

M4K2234 is supplied as a solid. A stock solution may be made by dissolving the M4K2234 in the solvent of choice, which should be purged with an inert gas. M4K2234 is slightly soluble (0.1-1 mg/ml) in acetonitrile and water and sparingly soluble (1-10 mg/ml) in DMSO.

Description

M4K2234 is an inhibitor of activin receptor-like kinase 1 (ALK1) and ALK2 (IC₅₀s = 7 and 14 nM, respectively).¹ M4K2234 is selective for ALK1 and ALK2 over ALK3, -4, -5, and -6 (IC₅₀s = 168, 1,660, 1,950, and 88 nM, respectively), as well as 30 additional kinases at 1 μM, but does inhibit TRAF2- and NCK-interacting kinase (TNIK; IC₅₀ = 41 nM). M4K2234 also inhibits ALK2 containing the gain-of-function mutations ALK2^{G328V}, ALK2^{R206H}, and ALK2^{R258G} (IC₅₀s = 3, 6, and 6 nM, respectively).^{1,2} It reduces BMP7-induced increases in the phosphorylation of SMAD1/5/8 *in vitro* when used at concentrations ranging from 100 to 10,000 nM and reduces the growth of SU-DIPG-XXI and HSJD-DIPG-007 cells derived from patients with diffuse intrinsic pontine gliomas (DIPGs) and containing the respective mutations ALK2^{G328V} and ALK2^{R206H} (GI₅₀s = 0.04 and 4.3 μM, respectively).² See the Structural Genomics Consortium (SGC) website for more information.

References

1. M4K2234 chemical probe for ALK1 and ALK2 protein kinases. <https://www.thesgc.org/chemical-probes/m4k2234> (2024).
2. Ensan, D., Smil, D., Zepeda-Velázquez, C.A., *et al.* Targeting ALK2: An open science approach to developing therapeutics for the treatment of diffuse intrinsic pontine glioma. *J. Med. Chem.* **63**(9), 4978-4996 (2020).

WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

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