

PRODUCT INFORMATION



MK-5108

Item No. 19167

CAS Registry No.: 1010085-13-8

Formal Name: *trans*-4-(3-chloro-2-fluorophenoxy)-1-[[6-(2-thiazolylamino)-2-pyridinyl]methyl]-cyclohexanecarboxylic acid
Synonym: VX-689

MF: C₂₂H₂₁ClFNO₃S

FW: 461.9

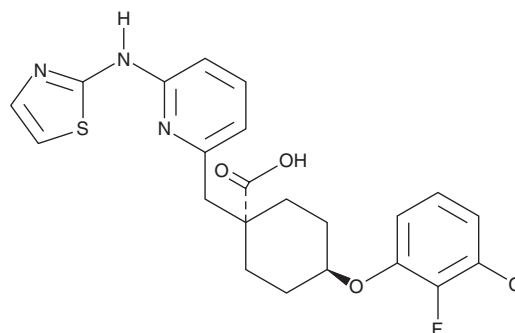
Purity: ≥95%

UV/Vis.: λ_{max}: 278, 310 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

MK-5108 is supplied as a crystalline solid. A stock solution may be made by dissolving the MK-5108 in the solvent of choice, which should be purged with an inert gas. MK-5108 is soluble in organic solvents such as DMSO and dimethyl formamide (DMF). The solubility of MK-5108 in these solvents is approximately 2 and 5 mg/ml, respectively.

MK-5108 is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, MK-5108 should first be dissolved in DMF and then diluted with the aqueous buffer of choice. MK-5108 has a solubility of approximately 0.025 mg/ml in a 1:30 solution of DMF:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

The Aurora kinases are a family of serine/threonine kinases that are key regulators of mitosis and cytokinesis. MK-5108 is a potent inhibitor of Aurora A (IC₅₀ = 0.064 nM).¹ It less potently inhibits Aurora B and Aurora C (IC₅₀s = 14 and 12 nM, respectively). MK-5108 blocks cell cycle progression and induces apoptosis in a diverse range of human tumor types.^{1,2} It is effective *in vivo*, inhibiting the growth of xenograft tumors in mice.¹

References

1. Harrington, E.A., Bebbington, D., Moore, J., *et al.* VX-680, a potent and selective small-molecule inhibitor of the Aurora kinases, suppresses tumor growth *in vivo*. *Nat. Med.* **10**(3), 262-267 (2004).
2. Shimmoura, T., Hasako, S., Nakatsuru, Y., *et al.* MK-5108, a highly selective Aurora-A kinase inhibitor, shows antitumor activity alone and in combination with docetaxel. *Mol. Cancer Ther.* **9**(1), 157-166 (2010).

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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