

Product Information



WYE-354

Item No. 13604

CAS Registry No.: 1062169-56-5

Formal Name: 4-[6-[4-[(methoxycarbonyl)amino]phenyl]-4-(4-morpholinyl)-1H-pyrazolo[3,4-d]pyrimidin-1-yl]-methyl ester-1-piperidinecarboxylic acid

MF: C₂₄H₂₉N₇O₅

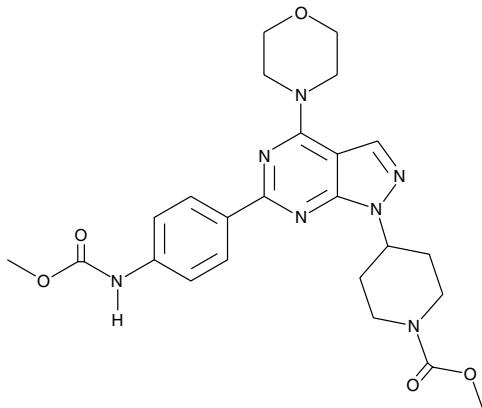
FW: 495.5

Purity: ≥98%

Stability: ≥2 years at -20°C

Supplied as: A crystalline solid

UV/Vis.: λ_{max}: 287 nm



Laboratory Procedures

For long term storage, we suggest that WYE-354 be stored as supplied at -20°C. It should be stable for at least two years.

WYE-354 is supplied as a crystalline solid. A stock solution may be made by dissolving the WYE-354 in the solvent of choice. WYE-354 is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF), which should be purged with an inert gas. The solubility of WYE-354 in ethanol is approximately 0.4 mg/ml and approximately 30 mg/ml in DMSO and DMF.

WYE-354 is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, WYE-354 should first be dissolved in DMF and then diluted with the aqueous buffer of choice. WYE-354 has a solubility of approximately 0.5 mg/ml in a 1:1 solution of DMF:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

WYE-354 is a potent cell-permeable inhibitor of mTOR (IC₅₀ = 4.3 nM) which blocks signaling through both mTOR complex 1 (mTORC1) and mTORC2.^{1,2} It is a much weaker inhibitor of phosphatidylinositol 3-kinase α (IC₅₀ = 1026 nM) and other kinases.² WYE-354 induces G₁ cell cycle arrest in both rapamycin-sensitive and rapamycin-resistant cancer cell lines, inhibits mTORC1 and mTORC2 in tumor-bearing mice, and reduces tumor growth in nude mice with PTEN-null tumors.¹

References

1. Yu, K., Toral-Barza, L., Shi, C., *et al.* Biochemical, cellular, and *in vivo* activity of novel ATP-competitive and selective inhibitors of the mammalian target of rapamycin. *Cancer Res.* **69**(15), 6232-6240 (2009).
2. Zhao, Y., Wieman, H.L., Jacobs, S.R., *et al.* Mechanisms and methods in glucose metabolism and cell death. *Methods Enzymol.* **442**, 1-14 (2008).

Related Products

For a list of related products please visit: www.caymanchem.com/catalog/13604

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WARNING: THIS PRODUCT IS FOR LABORATORY RESEARCH ONLY: NOT FOR ADMINISTRATION TO HUMANS. NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

MATERIAL SAFETY DATA

This material should be considered hazardous until information to the contrary becomes available. Do not ingest, swallow, or inhale. Do not get in eyes, on skin, or on clothing. Wash thoroughly after handling. This information contains some, but not all, of the information required for the safe and proper use of this material. Before use, the user must review the complete Material Safety Data Sheet, which has been sent *via* email to your institution.

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