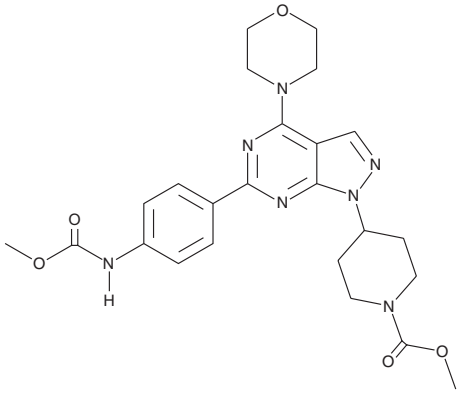
PRODUCT INFORMATION

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]-1-piperidinecarboxylic acid, methyl ester
MF:	$C_{24}H_{29}N_7O_5$
FW:	495.5
Purity:	≥98%
UV/Vis.:	λ_{max}: 287 nm
Supplied as:	A crystalline solid
Storage:	-20°C
Stability:	≥2 years

Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Laboratory Procedures

WYE-354 is supplied as a crystalline solid. A stock solution may be made by dissolving the WYE-354 in the solvent of choice, which should be purged with an inert gas. WYE-354 is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). The solubility of WYE-354 in these solvents is approximately 0.4, 30, and 50 mg/ml, respectively.

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.

Description

WYE-354 is a potent cell-permeable inhibitor of mTOR (IC_{50} = 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 (IC_{50} = 1026 nM) and other kinases.[2] WYE-354 induces G_1 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**, 439-457 (2008).

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