

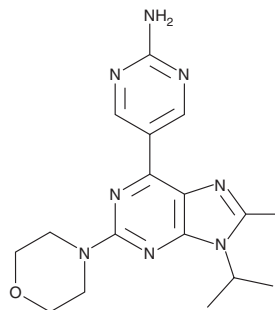
PRODUCT INFORMATION



VS-5584

Item No. 16294

CAS Registry No.: 1246560-33-7
Formal Name: 5-[8-methyl-9-(1-methylethyl)-2-(4-morpholinyl)-9H-purin-6-yl]-2-pyrimidinamine
MF: C₁₇H₂₂N₈O
FW: 354.4
Purity: ≥98%
UV/Vis.: λ_{max}: 240, 285, 354 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

VS-5584 is supplied as a crystalline solid. A stock solution may be made by dissolving the VS-5584 in the solvent of choice, which should be purged with an inert gas. VS-5584 is soluble in organic solvents such as DMSO and dimethyl formamide (DMF). The solubility of VS-5584 in these solvents is approximately 15 and 10 mg/ml, respectively.

VS-5584 is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, VS-5584 should first be dissolved in DMF and then diluted with the aqueous buffer of choice. VS-5584 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

Phosphatidylinositol 3-kinase (PI3K) signaling through Akt/PKB and the mammalian target of rapamycin (mTOR) controls gene expression related to cell proliferation, differentiation, and apoptosis. Increased activity of this pathway is important in many types of cancer. VS-5584 is a purine analog that inhibits mTOR (IC₅₀ = 37 nM) and PI3K (IC₅₀s = 16, 68, 25, and 42 nM for the α, β, γ, and δ isoforms, respectively) without relevant activity against more than 400 additional lipid and protein kinases.¹ By inhibiting the phosphorylation of substrates downstream of PI3K and mTOR, VS-5584 demonstrates broad anti-proliferative sensitivity leading to tumor growth inhibition in human tumor models.¹

Reference

1. Hart, S., Novotny-Diermayr, V., Goh, K.C., *et al.* VS-5584, a novel and highly selective PI3K/mTOR kinase inhibitor for the treatment of cancer. *Mol. Cancer Ther.* **12**(2), 151-161 (2013).

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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