

PRODUCT INFORMATION



GDC-0941

Item No. 11600

CAS Registry No.: 957054-30-7
Formal Name: 2-(1H-indazol-4-yl)-6-[[4-(methylsulfonyl)-1-piperazinyl]methyl]-4-(4-morpholinyl)-thieno[3,2-d]pyrimidine

Synonyms: GNE-0941, Pictilisib, Pictrelisib

MF: C₂₃H₂₇N₇O₃S₂

FW: 513.6

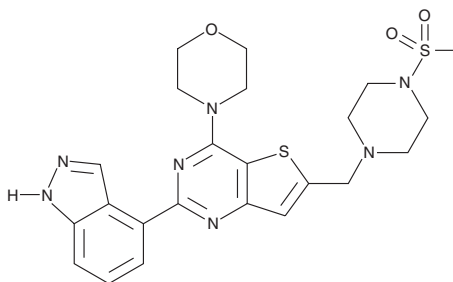
Purity: ≥98%

UV/Vis.: λ_{max}: 213, 260, 319 nm

Supplied as: A crystalline solid

Storage: -20°C

Stability: As supplied, 2 years from the QC date provided on the Certificate of Analysis, when stored properly



Laboratory Procedures

GDC-0941 is supplied as a crystalline solid. A stock solution may be made by dissolving the GDC-0941 in the solvent of choice. GDC-0941 is soluble in organic solvents such as DMSO and dimethyl formamide, which should be purged with an inert gas. The solubility of GDC-0941 in these solvents is approximately 25 mg/ml.

GDC-0941 is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, GDC-0941 should first be dissolved in DMSO and then diluted with the aqueous buffer of choice. GDC-0941 has a solubility of approximately 0.15 mg/ml in a 1:5 solution of DMSO:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

The phosphatidylinositol 3-kinase (PI3K) signaling pathway has central roles in cell growth, development, and survival.^{1,2} GDC-0941 is a potent pan inhibitor of class I catalytic subunits of PI3K, inhibiting p110α, β, δ, and γ with IC₅₀ values of 3, 33, 3, and 75 nM, respectively.^{3,4} It is much less effective against class II-IV isoforms of PI3K and against mTOR.^{3,5} GDC-0941 inhibits the growth of certain types of cancer cells and blocks signaling through PI3K to Akt, both in cells and *in vivo*.^{3,6}

References

1. Hennessy, B.T., Smith, D.L., Ram, P.T., *et al. Nat. Rev. Drug Discov.* **4**, 988-1004 (2005).
2. Hirsch, E., Ciruolo, E., Ghigo, A., *et al. Pharmacol. Ther.* **118**, 192-205 (2008).
3. Folkes, A.J., Ahmadi, K., Alderton, W.K., *et al. J. Med. Chem.* **51(18)**, 5522-5532 (2008).
4. Berndt, A., Miller, S., Williams, O., *et al. Nat. Chem. Biol.* **6(2)**, 117-124 (2010).
5. Sutherland, D.P., Sampath, D., Berry, M., *et al. J. Med. Chem.* **53(3)**, 1086-1097 (2010).
6. Raynaud, F.I., Eccles, S.A., Patel, S., *et al. Mol. Cancer Ther.* **8(7)**, 1725-1738 (2009).

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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