



## Product Specification Sheet

**Product Name:** GDC-0980 (RG7422)

**Catalog Number:** C4098

### Technical information:

Chemical Formula:  $C_{23}H_{30}N_8O_3S$

CAS #: 1032754-93-0

Molecular Weight: 498.6

Purity: > 98%

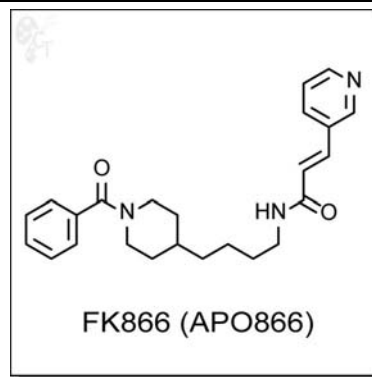
Appearance: White solid

Solubility: Soluble in DMSO up to 40 mM

Chemical Name: (S)-1-(4-((2-(2-aminopyrimidin-5-yl)-7-methyl-4-morpholinothieno[3,2-d]pyrimidin-6-yl)methyl)piperazin-1-yl)-2-hydroxypropan-1-one

Storage: Store solid powder at 4°C desiccated; Store DMSO solution at -20°C.

Shelf Life: In the unopened package, powder is stable for 1 year and DMSO solution is stable for 6 months under proper storage condition.



**Handling:** • To make 10 mM stock solution, add 0.201mL of DMSO for each mg of GDC-0980 (RG7422).

- For DMSO solution, briefly spin the vial at 500 rpm in a 50 mL conical tube to ensure maximum sample recovery.

**Biological Activity:** GDC0980, a orally-available, thienopyrimidine-based, ATP-competitive dual inhibitor of PI3K class I isoforms (IC<sub>50</sub> of 5, 27, 7, and 14 nM for PI3Ka, b, d, and g) and mTOR (K<sub>i</sub> of 17 nM). [1] GDC0980 potently inhibits signal transduction (Thr308, Ser473) downstream of both PI3K and mTOR and showed most potent antitumor activity in breast, prostate, and lung cancer (IC<sub>50</sub> <500 nM) cells. Treatment of cancer cells with GDC0980 resulted in G1 cell-cycle arrest. [2]

**Reference:** 1. Sutherlin et al., Discovery of a Potent, Selective, and Orally Available Class I Phosphatidylinositol 3-Kinase (PI3K)/Mammalian Target of Rapamycin (mTOR) Kinase Inhibitor (GDC-0980) for the Treatment of Cancer. *J. Med. Chem.* 2011, 54, 7579-7587. Pubmed ID: 21981714

2. Wallin et al., GDC-0980 Is a Novel Class I PI3K/mTOR Kinase Inhibitor with Robust Activity in Cancer Models Driven by the PI3K Pathway, *Mol. Cancer Ther.* 2011, 10, 2426-2436. Pubmed ID: 21998291

To reorder: <http://www.cellagentech.com/GDC-0980-RG7422/>

For Technical Support: [technical@cellagentech.com](mailto:technical@cellagentech.com)

*Chemicals are sold for research use only, not for clinical or diagnostic use.*