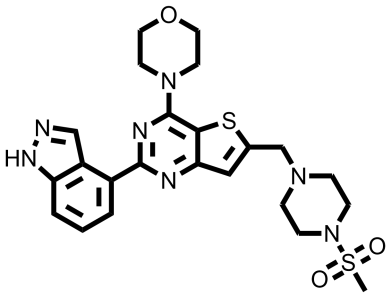
Xcess Biosciences Inc.
7144 N Harlem Ave #169
Chicago, IL 60631 USA

http://www.xcessbio.com
Toll free: 1-866-706-2330
Fax: 1-619- 810-0718
Email: info@xcessbio.com

PI3K Inhibitor GDC-0941

Chemical Name: 4-(2-(1H-indazol-4-yl)-6-((4-(methylsulfonyl)piperazin-1-yl)methyl)thieno[3,2-d]pyrimidin-4-yl)morpholine



Molecular Weight:	513.64
Formula:	$C_{23}H_{27}N_7O_3S_2$
Purity:	≥98%
CAS#:	957054-30-7
Solubility:	DMSO up to 100 mM
Storage	Powder: 4 °C 1 year DMSO: 4 °C 3 month -20 °C 1 year

Biological Activity:

GDC-0941 is a highly potent, selective and orally bioavailable class-I PI3K kinase inhibitor. Its IC_{50} for PI3K p110 α, β, δ and γ isoforms are 3 nM, 33 nM, 3 nM, and 75 nM, respectively; and its IC_{50} for DNA-PK and mTOR are 1230 nM and 580 nM. It potently inhibits the phosphorylation of Akt in U87MG, PC3, and MDA-MB-361 cells with IC_{50} of 46 nM, 37 nM, and 28 nM, respectively. It also inhibits the proliferation of U87MG, A2780, PC3, and MDA-MB-361 cells with IC_{50} of 0.95 μM, 0.14 μM, 0.28 μM, and 0.72 μM, respectively. GDC-0941 inhibits tumor cell proliferation, induces apoptosis and suppresses centroblast population. It is now in Phase I clinical trials targeting several advanced or metastatic solid tumors.

How to Use:

In vitro: GDC-0941 was used at 1-10 μM in vitro and in cellular assays.

In vivo: GDC-0941 was orally dosed to mice at 75-150 mg/kg once per day for two weeks.

Reference:

1. Folkes AJ, et al. The identification of 2-(1H-indazol-4-yl)-6-(4-methanesulfonyl-piperazin-1-ylmethyl)-4-morpholin-4-yl-thieno[3,2-d]pyrimidine (GDC-0941) as a potent, selective, orally bioavailable inhibitor of class I PI3 kinase for the treatment of cancer.(2008) J. Med. Chem. 51(18), 5522-32.
2. Raynaud FI, et al. Biological properties of potent inhibitors of class I phosphatidylinositide 3-kinases: from PI-103 through PI-540, PI-620 to the oral agent GDC-0941. (2009) Mol. Cancer Ther. 8(7), 1725-38.
3. Zheng L, et al. GDC-0941 sensitizes breast cancer to ABT-737 in vitro and in vivo through promoting the degradation of Mcl-1.(2011) Cancer Lett. 309(1):27-36.
4. Haagensen EJ, et al. The synergistic interaction of MEK and PI3K inhibitors is modulated by mTOR inhibition. (2012) Br J Cancer. 106(8):1386-94.