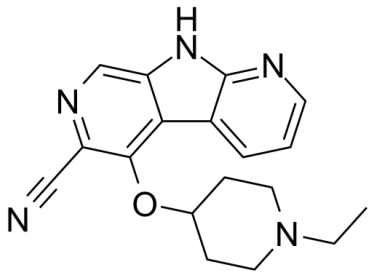
Data Sheet

Product Name:	GDC-0425
Cat. No.:	CS-0016930
CAS No.:	1200129-48-1
Molecular Formula:	$C_{18}H_{19}N_5O$
Molecular Weight:	321.38
Target:	Checkpoint Kinase (Chk)
Pathway:	Cell Cycle/DNA Damage
Solubility:	H2O : 25 mg/mL (77.79 mM; ultrasonic and adjust pH to 3 with HCl)



BIOLOGICAL ACTIVITY:

GDC-0425 (RG-7602) is an orally available, highly selective small molecule **ChK1** inhibitor. GDC-0425 can be used for the research of various malignancies[1][2]. **In Vitro:** MEK inhibition either by pharmacologic inhibitors or RNAi-mediated gene silencing significantly protected cells from reduced viability upon GDC-0425 treatment[3].
GDC-0425 (3 μM; 24 hours) treatment results the hyperphosphorylation of Chk1[3]. **In Vivo:** GDC-0425 exhibits partial suppression of tumor growth. The Gemcitabine/GDC-0425 combination results in significant tumor regression in all tested models[3].

References:

[1]. Xiao Ding, et al. A supported liquid extraction LC-MS/MS method for determination of concentrations of GDC-0425, a small molecule Checkpoint kinase 1 inhibitor, in human plasma. Biomed Chromatogr. 2016 Dec;30(12):1984-1991.

[2]. Jeffrey R Infante, et al. Phase I Study of GDC-0425, a Checkpoint Kinase 1 Inhibitor, in Combination with Gemcitabine in Patients with Refractory Solid Tumors. Clin Cancer Res. 2017 May 15;23(10):2423-2432.

[3]. Ho-June Lee, et al. Ras-MEK Signaling Mediates a Critical Chk1-Dependent DNA Damage Response in Cancer Cells. Mol Cancer Ther. 2017 Apr;16(4):694-704.

CAIndexNames:

9H-Pyrrolo[2,3-b:5,4-c']dipyridine-6-carbonitrile, 5-[(1-ethyl-4-piperidinyl)oxy]-

SMILES:

N#CC1=NC=C2C(C3=CC=CN=C3N2)=C1OC4CCN(CC)CC4

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