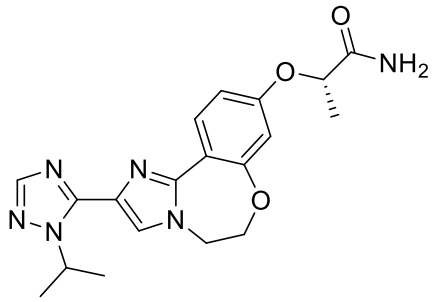
Product data sheet

MedKoo Cat#: 206579 Name: GDC-0326 CAS: 1282514-88-8 Chemical Formula: $C_{19}H_{22}N_6O_3$ Exact Mass: 382.1753 Molecular Weight: 382.424	
Product supplied as:	Powder
Purity (by HPLC):	≥ 98%
Shipping conditions	Ambient temperature
Storage conditions:	Powder: -20°C 3 years; 4°C 2 years.
	In solvent: -80°C 3 months; -20°C 2 weeks.

1. Product description:

GDC-0326 is a potent and selective inhibitor of α-Isoform of Phosphoinositide 3-Kinase (PI3Kalpha inhibitor). GDC-0326 achieves a very high level of selectivity over other kinases. GDC-0326 has low plasma CL in human. Within the PI3 kinase family, there are four class I PI3K isoforms (α, β, δ, and γ). Of these isoforms, PI3Kα is the most commonly associated with cancers.

2. CoA, QC data, SDS, and handling instruction

SDS and handling instruction, CoA with copies of QC data (NMR, HPLC and MS analytical spectra) can be downloaded from the product web page under "QC And Documents" section. Note: copies of analytical spectra may not be available if the product is being supplied by MedKoo partners. Whether the product was made by MedKoo or provided by its partners, the quality is 100% guaranteed.

3. Solubility data

Solvent	Max Conc. mg/mL	Max Conc. mM
DMF	30.0	78.45
DMSO	68.67	179.56
Ethanol	19.0	49.68

4. Stock solution preparation table:

Concentration / Solvent Volume / Mass	1 mg	5 mg	10 mg
1 mM	2.61 mL	13.07 mL	26.15 mL
5 mM	0.52 mL	2.61 mL	5.23 mL
10 mM	0.26 mL	1.31 mL	2.61 mL
50 mM	0.05 mL	0.26 mL	0.52 mL

5. Molarity Calculator, Reconstitution Calculator, Dilution Calculator

Please refer the product web page under section of "Calculator"

6. Recommended literature which reported protocols for in vitro and in vivo study

In vitro study

1. Zhang Z, Ju F, Chen F, Wu H, Chen J, Zhong J, Shao L, Zheng S, Wang L, Xue M. GDC-0326 Enhances the Effects of 5-Fu in Colorectal Cancer Cells by Inducing Necroptotic Death. Onco Targets Ther. 2021 Apr 13;14:2519-2530. doi: 10.2147/OTT.S302334. PMID: 33880032; PMCID: PMC8053532.

In vivo study

1. Soler A, Figueiredo AM, Castel P, Martin L, Monelli E, Angulo-Urarte A, Milà-Guasch M, Viñals F, Baselga J, Casanovas O, Graupera M. Therapeutic Benefit of Selective Inhibition of p110α PI3-Kinase in Pancreatic Neuroendocrine Tumors. Clin Cancer Res. 2016 Dec 1;22(23):5805-5817. doi: 10.1158/1078-0432.CCR-15-3051. Epub 2016 May 25. PMID: 27225693; PMCID: PMC5338478.

7. Bioactivity

Biological target:

GDC-0326 is a potent and selective PI3Kα inhibitor with a Ki of 0.2 nM.

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In vitro activity

As shown in Figure 1A, GDC-0326 induced the protein expression of RIPK1 and RIPK3 in both LoVo and HT-29 cells. In addition, colony formation assay demonstrated that GDC-0326 caused a decreased in the clonogenic growth of CRC cells; thus, GDC-0326 attenuated cell proliferation (Figure 1B and C). Additionally, immunofluorescence studies revealed accumulation of RIPK1 and RIPK3 after GDC-0326 treatment of the CRC cells (Figure 1D). These results indicate that the effects of GDC-0326 on the growth and viability of CRC cells involved RIPK1 and RIPK3.

Reference: Onco Targets Ther. 2021 Apr 13;14:2519-2530. https://pubmed.ncbi.nlm.nih.gov/33880032/

In vivo activity

Treatment with GDC-0326 abolished AKT phosphorylation in βTC3 cells (Fig. 3B) and in RIP1-Tag2 tumors (Fig. 5A).

Reference: Clin Cancer Res. 2016 Dec 1;22(23):5805-5817. https://pubmed.ncbi.nlm.nih.gov/27225693/