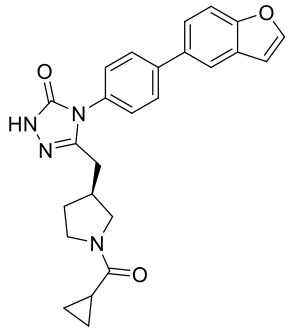
Product data sheet

MedKoo Cat#: 206467 Name: GSK2194069 CAS: 1332331-08-4 Chemical Formula: $C_{25}H_{24}N_4O_3$ Exact Mass: 428.1848 Molecular Weight: 428.492	
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:

GSK2194069 is a potent and selective human fatty acid synthase (hFAS) inhibitor (IC50 = 7.7 nM). Human fatty acid synthase (hFAS) is a complex, multifunctional enzyme that is solely responsible for the de novo synthesis of long chain fatty acids. hFAS is highly expressed in a number of cancers, with low expression observed in most normal tissues. Although normal tissues tend to obtain fatty acids from the diet, tumor tissues rely on de novo fatty acid synthesis, making hFAS an attractive metabolic target for the treatment of cancer.

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	70.01
DMSO	54.28	126.68
Ethanol	4.91	11.46

4. Stock solution preparation table:

Concentration / Solvent Volume / Mass	1 mg	5 mg	10 mg
1 mM	2.33 mL	11.67 mL	23.34 mL
5 mM	0.47 mL	2.33 mL	4.67 mL
10 mM	0.23 mL	1.17 mL	2.33 mL
50 mM	0.05 mL	0.23 mL	0.47 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. Oh JE, Jung BH, Park J, Kang S, Lee H. Deciphering Fatty Acid Synthase Inhibition-Triggered Metabolic Flexibility in Prostate Cancer Cells through Untargeted Metabolomics. Cells. 2020 Nov 10;9(11):2447. doi: 10.3390/cells9112447. PMID: 33182594; PMCID: PMC7697567.
2. Hardwicke MA, Rendina AR, Williams SP, Moore ML, Wang L, Krueger JA, Plant RN, Totoritis RD, Zhang G, Briand J, Burkhart WA, Brown KK, Parrish CA. A human fatty acid synthase inhibitor binds β-ketoacyl reductase in the keto-substrate site. Nat Chem Biol. 2014 Sep;10(9):774-9. doi: 10.1038/nchembio.1603. Epub 2014 Aug 3. PMID: 25086508.

In vivo study

TBD

7. Bioactivity

Biological target:

Product data sheet

GSK2194069 is a potent inhibitor of β-ketoyl reductase (KR) of fatty acid synthase (FAS), with an IC50 value of 7.7 nM. GSK2194069 shows specifically inhibitory effect on FAS expressing cancer cells, by acting potent efficacy on acetoacetyl-CoA, NADPH with IC50 or Ki values of 4.8 nM and 5.6 nM, respectively.

In vitro activity

The prostate cancer cell line was examined after treatment with different concentrations of Fasnall, GSK2194069, and TVB-3166. All three FAS inhibitors significantly reduced cell viability at 50 μM. FAS enzyme activity assay shows that GSK2194069 and TVB-3166 inhibit the human purified FAS activity with an IC_{50} of 0.0604, and 0.0736 μM, respectively.

Reference: Cells. 2020 Nov 10;9(11):2447. https://pubmed.ncbi.nlm.nih.gov/33182594/

In vivo activity

TBD

Note: The information listed here was extracted from literature. MedKoo has not independently retested and confirmed the accuracy of these methods. Customer should use it just for a reference only.