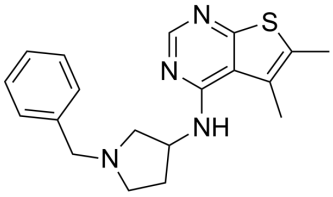
Fasnall

Cat. No.:	HY-121250
CAS No.:	929978-58-5
Molecular Formula:	$C_{19}H_{22}N_4S$
Molecular Weight:	338.47
Target:	Fatty Acid Synthase (FASN); Apoptosis
Pathway:	Metabolic Enzyme/Protease; Apoptosis
Storage:	Powder -20°C 3 years In solvent -80°C 6 months -20°C 1 month



BIOLOGICAL ACTIVITY

Description	Fasnall is a selective fatty acid synthase (FASN) inhibitor with an IC_{50} of 3.71 μM. Fasnall induces apoptosis in $HER2^+$ breast cancer cell lines. Fasnall shows potent anti-tumor activities[1].
IC_{50} & Target	IC50: 3.71 μM (human purified FASN activity)[1]
In Vitro	Fasnall potently blocks both acetate and glucose incorporation into total lipids, with IC_{50} values of 147 and 213 nM, respectively, in HepG2 cells[1]. Fasnall (50 μM; 24-120 h) inhibits proliferation in breast cancer cell lines[1]. Fasnall (25-100 μM; 24 h) induces apoptosis in $HER2^+$ breast cancer cell lines[1]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Cell Proliferation Assay[1]

Cell Line:	MCF7, MDA-MB-468, BT474 and SKBR3 cells
Concentration:	50 μM
Incubation Time:	24 h, 48 h, 72 h, 96 h, 120 h
Result:	Inhibited the proliferation of aggressive cell lines, but showed lower activity in the non-tumorigenic cell line MCF10A.

Apoptosis Analysis[1]

Cell Line:	MCF7, MDA-MB-468, BT474 and SKBR3 cells
Concentration:	25 μM, 50 μM , 75 μM, 100 μM
Incubation Time:	24 h
Result:	Induced caspase-3 and caspase-7 activation.

In Vivo	Fasnall (15 mg/kg, intraperitoneally, twice weekly; 3 weeks) shows potent anti-tumor activity in MMTV-Neu model of $HER2^+$ breast cancer[1]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Animal Model:	Female MMTV-NEU mice bearing $HER2^+$ breast cancer cells[1]
Dosage:	15 mg/kg
Administration:	i.p.; twice weekly; 3 weeks
Result:	Reduced tumor volume, and increased the median survival of the MMTV-Neu mice to 63 days.

REFERENCES

[1]. Yazan Alwarawrah, et al. Fasnall, a Selective FASN Inhibitor, Shows Potent Anti-tumor Activity in the MMTV-Neu Model of HER2(+) Breast Cancer. Cell Chem Biol. 2016 Jun 23;23(6):678-88.

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