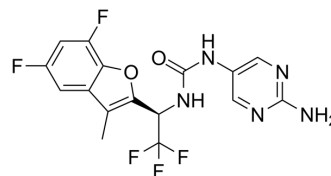


## STX-478

Cat. No.:	HY-156681		
CAS No.:	2883540-92-7		
Molecular Formula:	C <sub>16</sub> H <sub>12</sub> F <sub>5</sub> N <sub>5</sub> O <sub>2</sub>		
Molecular Weight:	401.29		
Target:	PI3K		
Pathway:	PI3K/Akt/mTOR		
Storage:	Powder	-20°C	3 years
		4°C	2 years
	In solvent	-80°C	6 months
		-20°C	1 month



### SOLVENT & SOLUBILITY

#### In Vitro

DMSO : 250 mg/mL (622.99 mM; Need ultrasonic)

Concentration	Solvent	Mass		
		1 mg	5 mg	10 mg
Preparing Stock Solutions	1 mM	2.4920 mL	12.4598 mL	24.9196 mL
	5 mM	0.4984 mL	2.4920 mL	4.9839 mL
	10 mM	0.2492 mL	1.2460 mL	2.4920 mL

Please refer to the solubility information to select the appropriate solvent.

### BIOLOGICAL ACTIVITY

**Description** STX-478 (compound 80) is an oral CNS-penetrant allosteric mutant-selective PI3K $\alpha$  inhibitor. STX-478 shows robust and durable tumor regression and can be used in cancer research<sup>[1]</sup>.

**IC<sub>50</sub> & Target** PI3K $\alpha$ <sup>[1]</sup>.

**In Vitro** STX-478 (0-10,000 nM; 1 h) demonstrates selectivity for MCF10A cells harboring the H1047R kinase-domain mutation<sup>[1]</sup>. MCE has not independently confirmed the accuracy of these methods. They are for reference only.  
Immunofluorescence<sup>[1]</sup>

Cell Line: MCF10A cells

Concentration: 0-10,000 nM

Incubation Time: 1 h

	Result:	Targeted the MCF10A cells (with the H1047R kinase domain mutation).
<b>In Vivo</b>	STX-478 (30, 100 mg/kg; p.o.; single daily for 28 days) dose-dependently reduces tumor volume in a CAL-33 xenograft mice model <sup>[1]</sup> . MCE has not independently confirmed the accuracy of these methods. They are for reference only.	
	Animal Model:	Female BALB/c nude mice (CAL-33 xenograft model) <sup>[1]</sup> .
	Dosage:	30, 100 mg/kg
	Administration:	Oral administration
	Result:	Showed a dose-dependent reduction in tumor volume.

## REFERENCES

[1]. JR David St Jean, et al. Urea derivatives which can be used to treat cancer. Patent WO2022265993A1.

**Caution: Product has not been fully validated for medical applications. For research use only.**

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