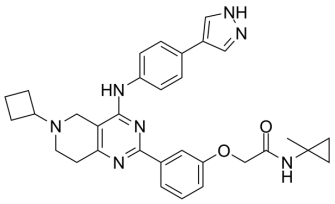
GLUT inhibitor-1

Cat. No.:	HY-139605
CAS No.:	2421141-40-2
Molecular Formula:	$C_{32}H_{35}N_7O_2$
Molecular Weight:	549.67
Target:	GLUT
Pathway:	Membrane Transporter/Ion Channel
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 : 100 mg/mL (181.93 mM; ultrasonic and warming and heat to 60°C)

Preparing Stock Solutions	Solvent / Mass / Concentration	1 mg	5 mg	10 mg
	1 mM	1.8193 mL	9.0964 mL	18.1927 mL
	5 mM	0.3639 mL	1.8193 mL	3.6385 mL
	10 mM	0.1819 mL	0.9096 mL	1.8193 mL

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

BIOLOGICAL ACTIVITY

Description

GLUT inhibitor-1 is a potent and orally active inhibitor of glucose transporters, targeting both GLUT1 and GLUT3, with IC_{50}s of 242 nM and 179 nM, respectively. GLUT inhibitor-1 has the potential for the reaesrch of cancers and autoimmune diseases [1].

IC_{50} & Target

GLUT1	GLUT3
242 nM (IC_{50})	179 nM (IC_{50})

In Vivo

Summary of the pharmacokinetic parameters of GLUT inhibitor-1 (compound 15b; 30 mg/kg) in mouse and rat[1].

Parameter	Mouse	Rat
oral C_{max} (ng/mL)	2525	1675

oral AUC (ng/mL)	5890	6813
CL (mL/min/kg)	40	37
V_{dss} (L/Kg)	1.70	4.51
$t_{1/2}$ (h)	0.785	2.59
F (%)	45.4	49.4
B/P[b]	0.05	

b: Solubility is determined in PBS buffer solutions.

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

REFERENCES

[1]. Liu KG, et al. Discovery and Optimization of Glucose Uptake Inhibitors. J Med Chem. 2020;63(10):5201-5211.

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