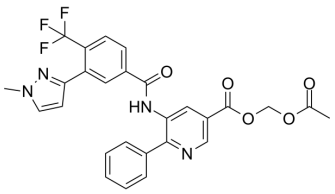
TrkA-IN-4

Cat. No.:	HY-151949
CAS No.:	3026111-74-7
Molecular Formula:	$C_{27}H_{21}F_3N_4O_5$
Molecular Weight:	538.47
Target:	Trk Receptor
Pathway:	Neuronal Signaling; Protein Tyrosine Kinase/RTK
Storage:	Powder -20°C 3 years In solvent -80°C 6 months -20°C 1 month



SOLVENT & SOLUBILITY

In Vitro

DMSO : 50 mg/mL (92.86 mM; ultrasonic and warming and heat to 60°C)

Preparing Stock Solutions	Mass / Solvent / Concentration	1 mg	5 mg	10 mg
	1 mM	1.8571 mL	9.2856 mL	18.5711 mL
	5 mM	0.3714 mL	1.8571 mL	3.7142 mL
	10 mM	0.1857 mL	0.9286 mL	1.8571 mL

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

BIOLOGICAL ACTIVITY

Description

TrkA-IN-4, a potent, orally active and allosteric TrkA inhibitor, is a proagent of TrkA-IN-3 (IC_{50}=22.4 nM, HY-151948). TrkA-IN-4 exhibits potent antinociceptive effects[1].

IC_{50} & Target

TrkA

In Vitro

TrkA-IN-4 (compound 39) demonstrates 65.1% and 46.3% of kinase inhibition towards TrkA at concentrations of 1 μM and 0.1 μM, respectively[1].

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

In Vivo

TrkA-IN-4 (compound 39) (0.9375-120 mg/kg; i.g.) exhibits stronger maximum antinociceptive effects 3 h after administration, with an ED_{50} of 7.836 mg/kg in hot plate testing on male mice[1].

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

Animal Model:	KM male mice (20-24 g) were received hot plate test

Dosage:	0.9375, 1.875, 3.75, 7.5, 15, 30, 60, 120 mg/kg
Administration:	A single i.g.
Result:	3 h after administration, exhibited potent antinociceptive effects, with an ED_{50} of 7.836 mg/kg.

REFERENCES

[1]. Tang S, et, al. Design, development and evaluation of a prodrug-type TrkA-selective inhibitor with antinociceptive effects in vivo. Eur J Med Chem. 2023 Jan 5;245(Pt 2):114901.

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