LQFM215

Cat. No.: HY-161137

Molecular Formula: $C_{25}H_{34}N_2O_2$

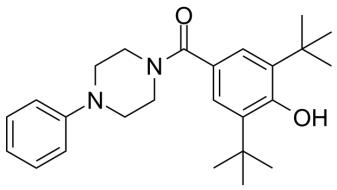
Molecular Weight: 394.55

Target: Others

Pathway: Others

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 (253.45 mM; Need ultrasonic)

Preparing Stock Solutions	Mass / Solvent / Concentration	1 mg	5 mg	10 mg
	1 mM	2.5345 mL	12.6727 mL	25.3453 mL
	5 mM	0.5069 mL	2.5345 mL	5.0691 mL
	10 mM	0.2535 mL	1.2673 mL	2.5345 mL

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

In Vivo

1. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 2.5 mg/mL (6.34 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

LQFM215 is a proline transporter (PROT) inhibitor. LQFM215 inhibits proline transport by competitively binding to the active site of PROT. LQFM215 effectively reduces hyperlocomotion and enhances social interaction[1].

In Vitro

LQFM215 (0.39-100 μM; 24 h) shows low neurotoxicity against LUHMES cells[1].

LQFM215 (0.09-100 μM; 24 h) shows concentration-dependent effects on growth of differentiated neural protrusions and cell survival in LUHMES cells[1].

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

Cell Viability Assay[1]

Cell Line:	LUHMES cells
Concentration:	0.09-100 μM

Incubation Time:	24 h
Result:	During the developmental phase, neural protrusion formation was inhibited at an IC_{50} of 3 μM. During maturation, a concentration of 14 μM IC_{50} reduced neural protrusion growth and cell survival.

Cell Cytotoxicity Assay[1]

Cell Line:	LUHMES cells
Concentration:	0.39-100 μM
Incubation Time:	24 h
Result:	Reduced cell viability and neural protrusion growth in LUHMES cells, but this effect was mitigated when co-cultured with astrocytes

In Vivo

LQFM215 (i.p.; 10-30 mg/kg; single dose) significantly reduces ketamine-induced hyperlocomotion in Swiss mice[1].

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

Animal Model:	Male Swiss mice [1]
Dosage:	10; 20; 30 mg/kg
Administration:	i.p.; single dose
Result:	Increased the time spent in social interaction with an intruder animal in ketamine-treated mice across all doses, particularly at 10 mg/kg and 20 mg/kg. Increased the number of social interactions at 30 mg/kg.

REFERENCES

[1]. Carvalho GA, et al. Novel Proline Transporter Inhibitor (LQFM215) Presents Antipsychotic Effect in Ketamine Model of Schizophrenia. Neurochem Res. 2024 Jan;49(1):170-183.

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