TTA-A8

Cat. No.: HY-14232

CAS No.: 1146395-46-1

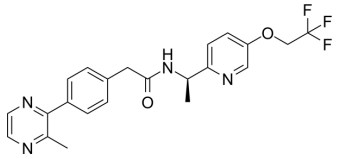
Molecular Formula: $C_{22}H_{21}F_3N_4O_2$

Molecular Weight: 430.42

Target: Calcium Channel

Pathway: Membrane Transporter/Ion Channel; Neuronal Signaling

Storage: Please store the product under the recommended conditions in the Certificate of Analysis.



BIOLOGICAL ACTIVITY

Description

TTA-A8 (Compound 13) is a short-acting T-type calcium channel antagonist with oral activity, exhibiting an IC_{50} value of 31.3 nM in the FLIPR depolarization assay. TTA-A8 possesses favorable pharmacokinetic properties, making it suitable for research on epilepsy and sleep[1].

In Vivo

TTA-A8 (3 mg/kg; p.o.; single dose) effectively shortened the duration of epileptic seizures in Wistar albino rats with genetic absence epilepsy. TTA-A8 (1-10 mg/kg; p.o.; single dose) significantly suppressed active wake and increased delta wave sleep in SD rats[1].

TTA-A8 (5 mg/kg; p.o.; single dose) exhibited moderate to high plasma clearance (CLp), low to moderate distribution volume (Vss), and short half-life ($T_{1/2}$) across three preclinical species (rat, dog, rhesus)[1].

Pharmacokinetic parameters in rat, dog, rhesus[1]

species	administration	dosage	CL (predicted)[a] (mL/min/kg)	CL_p (observed)(mL/min/kg)	$T_{1/2}$(h)	V_{ss} (L/kg)	F (%)	plasma PB (% unbound)[b]
rat	p.o.	5 mg/kg	8	30.3	0.24	0.59	71	12.3
dog	p.o.	5 mg/kg	13	11.8	0.81	0.36	23	15.5
rhesus	p.o.	5 mg/kg	22	19.3	0.53	0.74	5	14.6

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

REFERENCES

[1]. Yang Z Q, et al. Short-acting T-type calcium channel antagonists significantly modify sleep architecture in rodents[J]. ACS Medicinal Chemistry Letters, 2010, 1(9): 504-509.

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

Tel: 609-228-6898 Fax: 609-228-5909 E-mail: tech@MedChemExpress.com
Address: 1 Deer Park Dr, Suite Q, Monmouth Junction, NJ 08852, USA