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DATASHEET

TTA-P2

Product overview

Name	TTA-P2
Cat No	HB5851
Purity	>98%
Description	Potent, selective, reversible T-type calcium channel blocker

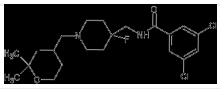
Biological Data

Biological description	Potent, selective, reversible T-type calcium channel blocker (IC_{50} = 100nM at DRG T currents) with no activity at high voltage calcium channels. Shows antinociceptive to reduces pain responses in mice. Also reverses thermal hyperalgesia in a streptozocin induced rat diabetes model.

Solubility & Handling

Storage instructions	+4°C
Solubility overview	Soluble in DMSO (50 mM), and in ethanol (50 mM)
Important	This product is for RESEARCH USE ONLY and is not intended for therapeutic or diagnostic use. Not for human or veterinary use

Chemical Data

Chemical name	3,5-Dichloro-N-((1-((2,2-dimethyltetrahydro-2H-pyran-4-yl) methyl)-4-fluoropiperidin-4-yl)methyl)benzamide
Molecular Weight	431.4
Chemical structure	
Molecular Formula	$C_{21}H_{29}Cl_2FN_2O_2$
CAS Number	918430-49-6
PubChem identifier	16005493
SMILES	Clc1cc(cc(Cl)c1)C(=O)NCC1(F)CCN(CC1)CC1CC(C)(C)OCC1
InChi	InChI=1S/C21H29Cl2FN2O2/c1-20(2)12-15(3-8-28-20)13-26-6-4-21(24,5-7-26)14-25-19(27)16-9-17(22)11-18(23)10-16/h9-11,15H,3-8,12-14H2,1-2H3,(H,25,27)
InChiKey	DKNDOKIVCXTFHJ-UHFFFAOYSA-N
MDL number	MFCD11977740
Appearance	Pale brown solid

References

TTA-P2 is a potent and selective blocker of T-type calcium channels in rat sensory neurons and a novel antinociceptive agent.

Choe W et al (2011) Molecular pharmacology 80

PubMedID 21821734

Inhibition of T-Type Calcium Channels With TTA-P2 Reduces Chronic Neuropathic Pain Following Spinal Cord Injury in Rats.

Liu H et al (2023) The journal of pain 24
PubMedID 37169156

Enhanced T-type calcium channel 3.2 activity in sensory neurons contributes to neuropathic-like pain of monosodium iodoacetate-induced knee osteoarthritis.

Shin SM et al (2020) Molecular pain 16
PubMedID 33054557