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DATASHEET

Tiagabine hydrochloride

Product overview

Name	Tiagabine hydrochloride
Cat No	HB0978
Biological action	Inhibitor
Purity	>99%
Description	Selective GAT-1 GABA uptake inhibitor

Images

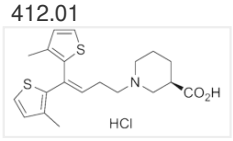
Biological Data

Biological description	Selective GAT-1 GABA uptake inhibitor (IC_{50} = 67 nM). Selective for GAT-1 over mGAT2, mGAT3 and mGAT4 (IC_{50} values are 0.8, 300, >300 and 800 µM respectively). Shows anticonvulsive, antinociceptive, anxiolytic and antidepressant actions. Blood-brain barrier permeable.

Solubility & Handling

Storage instructions	Room temperature (desiccate)
Solubility overview	Soluble in water (50mM) and in DMSO (100mM)
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*R*)-1-[4,4-Bis(3-methyl-2-thienyl)-3-butenyl]-3-piperidinecarboxylic acid hydrochloride
Molecular Weight	412.01
Chemical structure	
Molecular Formula	$C_{20}H_{25}NO_2S_2.HCl$
CAS Number	145821-59-6
PubChem identifier	91274
SMILES	CC1=C(SC=C1)C(=CCCN2CCC[C@H](C2)C(=O)O)C3=C(C=CS3)C.Cl

InChi	InChI=1S/C20H25NO2S2.ClH/c1-14-7-11-24-18(14)17(19-15(2)8-12-25-19)6-4-10-21-9-3-5-16(13-21)20(22)23;/h6-8,11-12,16H,3-5,9-10,13H2,1-2H3,(H,22,23);1H/t16-;/m1./s1
InChiKey	YUKARLAABCGMCN-PKLMIRHRSA-N
MDL number	MFCD07369025

References

Long-term anxiolytic and antidepressant-like behavioural effects of tiagabine, a selective GABA transporter-1 (GAT-1) inhibitor, coincide with a decrease in HPA system activity in C57BL/6 mice.

Thoeringer CK *et al* (2010) J Psychopharmacol 24(5)
PubMedID 19346277

Correlation between anticonvulsant activity and inhibitory action on glial gamma-aminobutyric acid uptake of the highly selective mouse gamma-aminobutyric acid transporter 1 inhibitor 3-hydroxy-4-amino-4,5,6,7-tetrahydro-1,2-benzisoxazole and its N-alkyla

White HS *et al* (2002) J Pharmacol Exp Ther 302(2)
PubMedID 12130726

Comparison of antiepileptic drugs tiagabine, lamotrigine, and gabapentin in mouse models of acute, prolonged, and chronic nociception.

Laughlin TM *et al* (2002) J Pharmacol Exp Ther 302(3)
PubMedID 12183677