

Product datasheet

Tiagabine hydrochloride, GAT-1 inhibitor ab120237

[2 References](#) [2 Images](#)

Overview

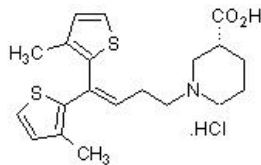
Product name	Tiagabine hydrochloride, GAT-1 inhibitor
Description	Selective GAT-1 inhibitor
Biological description	GABA uptake inhibitor, selective for GAT-1. Anticonvulsant <i>in vivo</i> .

Also available in simple stock solutions ([ab146701](#)) - add 1 ml of water to get an exact, ready-to-use concentration.

Purity > 99%

CAS Number 145821-59-6

Chemical structure



Properties

Chemical name	(3R)-1-[4,4-Bis(3-methyl-2-thienyl)-3-buten-1-yl]-3-piperidinecarboxylic acid hydrochloride
Molecular weight	412.00
Molecular formula	C ₂₀ H ₂₅ NO ₂ S ₂ .HCl
PubChem identifier	91274
Storage instructions	Store at +4°C. Store under desiccating conditions. The product can be stored for up to 12 months.
Solubility overview	Soluble in water to 25 mM and in 1 eq. NaOH to 100 mM
Handling	Wherever possible, you should prepare and use solutions on the same day. However, if you need to make up stock solutions in advance, we recommend that you store the solution as aliquots in tightly sealed vials at -20°C. Generally, these will be useable for up to one month. Before use, and prior to opening the vial we recommend that you allow your product to equilibrate to room temperature for at least 1 hour.

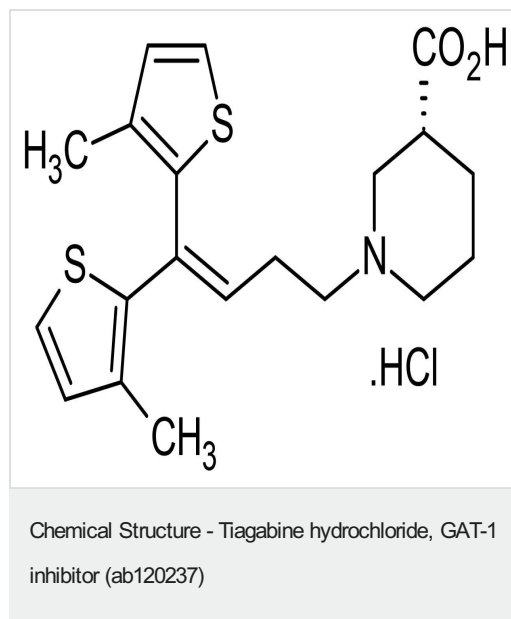
Need more advice on solubility, usage and handling? Please visit our [frequently asked questions \(FAQ\) page](#) for more details.

SMILES Cl.Cc3ccsc3C(=CCCN1CCC[C@H](C1)C(=O)O)c2sccc2C

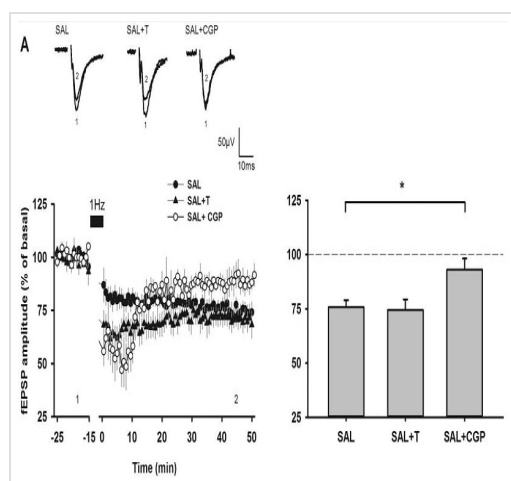
Source

Synthetic

Images



2D chemical structure image of ab120237, Tiagabine hydrochloride, GAT-1 inhibitor



Functional Studies - Tiagabine hydrochloride, GAT-1 inhibitor (ab120237)

Rideau Batista Novais et al PLoS One. 2014 Sep 3;9(9):e106302. doi: 10.1371/journal.pone.0106302. eCollection 2014. Fig 4. Reproduced under the Creative Commons license <http://creativecommons.org/licenses/by/4.0/>

Tiagabine restored LTD via the activation of GABA_B receptors in LPS animals.

Tiagabine (20 μ M) and/or CGP55845 (1 μ M) were applied in the perfusate during both the recording of baseline activity and LFS (1 Hz stimulation, 15 min) delivery. **(Panel A)** Time-course and recapitulative graph depicting LTD induction in control (SAL) animals. LFS induced an LTD of fEPSP amplitude in control animals (SAL; filled circles; N=8), which was significantly blocked by the GABA_B receptor antagonist CGP55845 (SAL+CGP; open circles; N=5; * p<0.05 vs SAL group). Tiagabine had no significant effect on LTD level (SAL+T; filled triangles; N=8).

Please note: All products are "FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC PROCEDURES, NOT FOR USE IN HUMANS"

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