

PRODUCT INFORMATION



Vigabatrin-¹³C-d₂ (hydrochloride)

Item No. 26672

Formal Name: 4-aminohex-5-enoic-6-¹³C-6,6-d₂ acid, monohydrochloride

Synonym: γ-Vinyl GABA-¹³C-d₂

MF: C₅[¹³C]H₉D₂NO₂ • HCl

FW: 168.6

Chemical Purity: ≥98% (Vigabatrin)

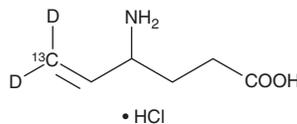
Deuterium

Incorporation: ≥99% deuterated forms (d₁-d₂); ≤1% d₀

Supplied as: A solid

Storage: -20°C

Stability: ≥2 years



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Laboratory Procedures

Vigabatrin-¹³C-d₂ (hydrochloride) is intended for use as an internal standard for the quantification of vigabatrin (Item No. 9000976) by GC- or LC-MS. The accuracy of the sample weight in this vial is between 5% over and 2% under the amount shown on the vial. If better precision is required, the deuterated standard should be quantitated against a more precisely weighed unlabeled standard by constructing a standard curve of peak intensity ratios (deuterated versus unlabeled).

Description

Vigabatrin-¹³C-d₂ is intended for use as an internal standard for the quantification of vigabatrin (Item No. 9000976) by GC- or LC-MS. Vigabatrin is an irreversible GABA transaminase (GABA-T) inhibitor.¹ It inhibits rat brain GABA-T when used at a concentration of 0.1 mM. Vigabatrin is selective for rat brain GABA-T over *P. fluorescens* GABA-T at 10 mM and is 100-fold selective over glutamic acid decarboxylase (GAD). Vigabatrin (1,500 mg/kg) decreases brain GABA-T activity without affecting GAD activity in mice.² It reduces the incidence of myoclonus in a mouse model of audiogenic seizures.³ Vigabatrin also increases the electroconvulsive threshold in mouse model of maximal electroshock-induced seizures and reduces the number of clonic convulsions induced by pentylenetetrazol (PTZ; Item No. 18682) in mice.⁴ Formulations containing vigabatrin have been used in the treatment of seizures and infantile spasms.

References

1. Lippert, B., Metcalf, B.W., Jung, M.J., *et al.* 4-Amino-hex-5-enoic acid, a selective catalytic inhibitor of 4-aminobutyric-acid aminotransferase in mammalian brain. *Eur. J. Biochem.* **74(3)**, 441-445 (1977).
2. Jung, M.J., Lippert, B., Metcalf, B.W., *et al.* γ-Vinyl GABA (4-amino-hex-5-enoic acid), A new selective irreversible inhibitor of GABA-T: Effects on brain GABA metabolism in mice. *J. Neurochem.* **29(5)**, 797-802 (1977).
3. Meldrum, B.S. and Murugaiah, K. Anticonvulsant action in mice with sound-induced seizures of the optical isomers of γ-vinyl GABA. *Eur. J. Pharm.* **89(1-2)**, 149-152 (1983).
4. Luszczki, J.J. and Czuczwar, S.J. Isobolographic characterization of interactions between vigabatrin and tiagabine in two experimental models of epilepsy. *Prog. Neuropsychopharmacol. Biol. Psychiatry* **31(2)**, 529-538 (2007).

WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

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