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Produktinformation

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- Diagnostik & molekulare Diagnostik
- Laborgeräte & Service

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Lieferung & Zahlungsart

siehe unsere Liefer- und Versandbedingungen

Zuschläge

- Mindermengenzuschlag
- Trockeneiszuschlag
- Gefahrgutzuschlag
- Expressversand

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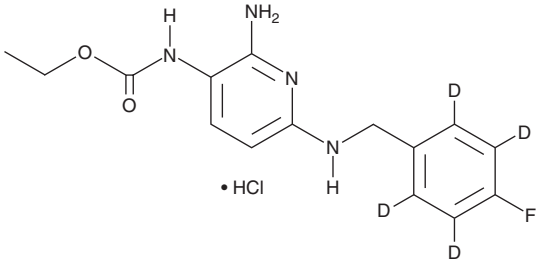
PRODUCT INFORMATION

Flupirtine-d_4 (hydrochloride)

Item No. 28695

CAS Registry No.: 1324717-75-0
Formal Name: N-[2-amino-6-[[(4-fluorophenyl-d_4)methyl] amino]-3-pyridinyl]-carbamic acid, ethyl ester, monohydrochloride
MF: $C_{15}H_{13}D_4FN_4O_2 \bullet HCl$
FW: 344.8
Chemical Purity: ≥98% (Flupirtine)
Deuterium Incorporation: ≥99% deuterated forms (d_1-d_4); ≤1% d_0
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

Flupirtine-d_4 (hydrochloride) is intended for use as an internal standard for the quantification of flupirtine (Item No. 16674) 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).

Flupirtine-d_4 (hydrochloride) is supplied as a solid. A stock solution may be made by dissolving the flupirtine-d_4 (hydrochloride) in the solvent of choice, which should be purged with an inert gas. Flupirtine-d_4 (hydrochloride) is slightly soluble in organic solvents such as acetone and methanol.

Description

Flupirtine is an activator of voltage-gated potassium channel 7 (K_V7/KCNQ).[1-3] It induces relaxation of preconstricted pulmonary arteries isolated from wild-type and serotonin transporter-overexpressing ($SERT^+$) mice.[2] Flupirtine (30 mg/kg per day) decreases mean right ventricular pressure and right ventricular hypertrophy in hypoxia-induced and $SERT^+$ mouse models of pulmonary arterial hypertension. It increases the paw withdrawal threshold in a rat model of streptozotocin-induced diabetic neuropathy when administered at a dose of 10 mg/kg and increases paw withdrawal latency in a rat model of carrageenan-induced paw inflammation when used in combination with morphine.[3] Flupirtine also indirectly antagonizes NMDA receptors *via* its effects on potassium channels.[1,4]

References

1. Devulder, J. Flupirtine in pain management: Pharmacological properties and clinical use. *CNS Drugs* **25(10)**, 867-881 (2010).
2. Morecroft, I., Murray, A., Nilsen, M., *et al*. Treatment with the K_V7 potassium channel activator flupirtine is beneficial in two independent mouse models of pulmonary hypertension. *Br. J. Pharmacol*. **157(7)**, 1241-1249 (2009).
3. Goodchild, C.S., Kolosov, A., Tucker, A.P., *et al*. Combination therapy with flupirtine and opioid: Studies in rat pain models. *Pain Med.* **9(7)**, 928-938 (2008).
4. Kornhuber, J., Bleich, S., Wiltfang, J., *et al*. Flupirtine shows functional NMDA receptor antagonism by enhancing Mg^{2+} block via activation of voltage independent potassium channels. *J. Neural Transm. (Vienna)* **106(9-10)**, 857-867 (1999).

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.

WARRANTY AND LIMITATION OF REMEDY
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