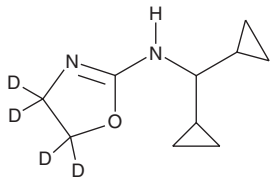
PRODUCT INFORMATION

Rilmenidine-d_4

Item No. 31691

CAS Registry No.: 85047-14-9
Formal Name: N-(dicyclopropylmethyl)-4,5-dihydro-4,5-d_2-2-oxazol-4,5-d_2-amine
Synonym: Oxaminozoline-d_4
MF: $C_{10}H_{12}D_4N_2O$
FW: 184.3
Chemical Purity: ≥98% (Rilmenidine)
Deuterium Incorporation: ≥99% deuterated forms (d_1-d_4); ≤1% d_0
Supplied as: A solid
Storage: -20°C
Stability: ≥4 years



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

Laboratory Procedures

Rilmenidine-d_4 is intended for use as an internal standard for the quantification of rilmenidine (Item No. 16988) 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).

Rilmenidine-d_4 is supplied as a solid. A stock solution may be made by dissolving the rilmenidine-d_4 in the solvent of choice, which should be purged with an inert gas. Rilmenidine-d_4 is soluble in methanol, DMSO, and dimethyl formamide.

Description

Rilmenidine is an antihypertensive agent.[1] It binds to imidazole receptors in bovine rostral ventrolateral medulla homogenates (K_i = 6.1 nM), as well as α_2-adrenergic receptors in bovine prefrontal cortex homogenates (K_i = 87 nM). Rilmenidine induces hypotension and bradycardia in anesthetized rats (ED_{50}s = 0.25 and 0.35 mg/kg, respectively). It also reduces mean arterial pressure and renal sympathetic nerve activity in a rabbit model of renal hypertension induced by a renal artery clip when administered at a dose of 2.5 mg/kg.[2] Rilmenidine (1 µM) increases levels of LC3-II, a marker of autophagy, in PC12 cells.[3] Formulations containing rilmenidine have been used in the treatment of hypertension.

References

1. Gomez, R.E., Ernsbarger, P., Feinland, G., *et al.* Rilmenidine lowers arterial pressure via imidazole receptors in brainstem C1 area. *Eur. J. Pharmacol.* **195(2)**, 181-191 (1991).
2. Burke, S.L., Evans, R.G., and Head, G.A. Effects of chronic sympatho-inhibition on renal excretory function in renovascular hypertension. *J. Hypertens.* **29(5)**, 945-952 (2011).
3. Williams, A., Sarkar, S., Cuddon, P., *et al.* Novel targets for Huntington's disease in an mTOR-independent autophagy pathway. *Nat. Chem. Biol.* **4(5)**, 295-305 (2008).

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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