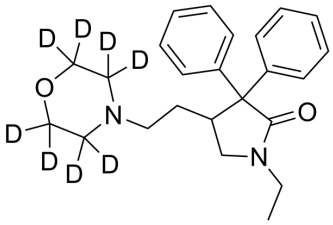
Doxapram-d_8

Cat. No.:	HY-B0551S
Molecular Formula:	$C_{24}H_{22}D_8N_2O_2$
Molecular Weight:	386.56
Target:	Potassium Channel; Isotope-Labeled Compounds
Pathway:	Membrane Transporter/Ion Channel; Others
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.



BIOLOGICAL ACTIVITY

Description	Doxapram-d_8 is deuterated labeled Doxapram (HY-B0551). Doxapram inhibits TASK-1, TASK-3 and TASK-1/TASK-3 heterodimer channels with EC50s of 410 nM, 37 μM and 9 μM, respectively.
In Vitro	Stable heavy isotopes of hydrogen, carbon, and other elements have been incorporated into drug molecules, largely as tracers for quantitation during the drug development process. Deuteration has gained attention because of its potential to affect the pharmacokinetic and metabolic profiles of drugs[1]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

REFERENCES

[1]. Cotten JF, et al. The ventilatory stimulant doxapram inhibits TASK tandem pore (K2P) potassium channel function but does not affect minimum alveolar anesthetic concentration. Anesth Analg, 2006, 102(3), 779-785.

[2]. Peers, C., Effects of doxapram on ionic currents recorded in isolated type I cells of the neonatal rat carotid body. Brain Res, 1991. 568(1-2): p. 116-22.

[3]. Anderson-Beck, R., et al., Doxapram stimulates dopamine release from the intact rat carotid body in vitro. Neurosci Lett, 1995. 187(1): p. 25-8.

[4]. Russak EM, et al. Impact of Deuterium Substitution on the Pharmacokinetics of Pharmaceuticals. Ann Pharmacother. 2019 Feb;53(2):211-216.

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