SZABO SCANDIC

Part of Europa Biosite

Produktinformation

- Forschungsprodukte & Biochemikalien
- Zellkultur & Verbrauchsmaterial
- Diagnostik & molekulare Diagnostik
- Laborgeräte & Service

Weitere Information auf den folgenden Seiten!
See the following pages for more information!

Lieferung & Zahlungsart

siehe unsere Liefer- und Versandbedingungen

Zuschläge

- Mindermengenzuschlag
- Trockeneiszuschlag
- Gefahrgutzuschlag
- Expressversand

SZABO-SCANDIC HandelsgmbH

Quellenstraße 110, A-1100 Wien

T. +43(0)1 489 3961-0

F. +43(0)1 489 3961-7

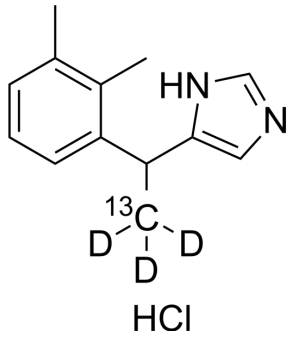
mail@szabo-scandic.com

www.szabo-scandic.com

linkedin.com/company/szaboscandic

Medetomidine-$^{13}C,d_3$ hydrochloride

Cat. No.:	HY-17034BS1
CAS No.:	1216630-06-6
Molecular Formula:	$C_{12}{}^{13}CH_{14}D_3ClN_2$
Molecular Weight:	240.75
Target:	Adrenergic Receptor; Isotope-Labeled Compounds
Pathway:	GPCR/G Protein; Neuronal Signaling; Others
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.



BIOLOGICAL ACTIVITY

Description	Medetomidine-13C,d3 (hydrochloride) is a deuterated labeled Medetomidine (hydrochloride)[1]. Medetomidine hydrochloride is an orally active α2-adrenoceptor agonist (K_i: 1.08 nM). Medetomidine hydrochloride has sedative and analgesic effects. Medetomidine hydrochloride can cause peripheral vasoconstriction through the activation of α2 adrenoceptors on blood vessels[2][3][4][5].
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]. Medetomidine (0-1 μM, 1 h) hydrochloride inhibits aldosterone release from the adrenocortical cell suspension[8]. Medetomidine (10 nM) hydrochloride activates a kicking response in Cyprids[9]. Medetomidine (1 μM) hydrochloride increases cellular cAMP production by activating β-like receptors in CHO cells[9]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.
In Vivo	Medetomidine (200 μg/kg, p.o. or i.m.) hydrochloride induces a sedation in cats[5]. Medetomidine (20 μg/kg, i.v.) hydrochloride shows sedative and analgesic effects in dogs[6]. Medetomidine (0.05-0.3 mg/kg, s.c.) hydrochloride protects against Diazinon-induced toxicosis in mice[7]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

REFERENCES

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

[2]. Kallio A, et al. Acute effects of medetomidine, a selective alpha 2-adrenoceptor agonist, on anterior pituitary hormone and cortisol secretion in man. Acta Endocrinol (Copenh). 1988 Sep;119(1):11-5.

[3]. R Virtanen, et al. Characterization of the selectivity, specificity and potency of medetomidine as an a2-adrenoceptor agonist.

[4]. O. B. Ansah, et al. Comparing oral and intramuscular administration of medetomidine in cats.

[5]. Kuo WC, et al. Comparative cardiovascular, analgesic, and sedative effects of medetomidine, medetomidine-hydromorphone, and medetomidine-butorphanol in dogs. Am J Vet Res. 2004 Jul;65(7):931-7.

[6]. Yakoub LK, et al. Medetomidine protection against diazinon-induced toxicosis in mice. Toxicol Lett. 1997 Sep 19;93(1):1-8.

[7]. Jager LP, et al. Effects of atipamezole, detomidine and medetomidine on release of steroid hormones by porcine adrenocortical cells in vitro. Eur J Pharmacol. 1998 Apr 3;346(1):71-6.

[8]. Ulrika Lind, et al. Octopamine receptors from the barnacle balanus improvisus are activated by the alpha2-adrenoceptor agonist medetomidine.

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

Tel: 609-228-6898 Fax: 609-228-5909 E-mail: tech@MedChemExpress.com

Address: 1 Deer Park Dr, Suite Q, Monmouth Junction, NJ 08852, USA