



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](https://www.linkedin.com/company/szaboscandic) 

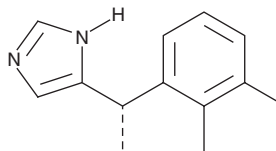
PRODUCT INFORMATION



Dexmedetomidine

Item No. 39544

CAS Registry No.: 113775-47-6
Formal Name: 5-[(1S)-1-(2,3-dimethylphenyl)ethyl]-1H-imidazole
Synonym: MPV 1440
MF: C₁₃H₁₆N₂
FW: 200.3
Purity: ≥98%
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

Dexmedetomidine is supplied as a solid. A stock solution may be made by dissolving the dexmedetomidine in the solvent of choice, which should be purged with an inert gas. Dexmedetomidine is soluble in DMSO. Dexmedetomidine is slightly soluble in acetonitrile.

Dexmedetomidine is slightly soluble in aqueous solutions. To enhance aqueous solubility, dilute the organic solvent solution into aqueous buffers or isotonic saline. If performing biological experiments, ensure the residual amount of organic solvent is insignificant, since organic solvents may have physiological effects at low concentrations. We do not recommend storing the aqueous solution for more than one day.

Description

Dexmedetomidine is an agonist of α_2 -adrenergic receptors (α_2 -ARs).¹ It selectively binds to α_2 -ARs over α_1 -ARs ($K_s = 0.015$ and 5 nM, respectively). *In vivo*, dexmedetomidine (50 $\mu\text{g}/\text{kg}$) prevents increases in cardiac troponin I (CTnI), a marker of myocardial injury, as well as reduces myocardial apoptosis, pyroptosis, and ferroptosis in a mouse model of sepsis induced by cecal ligation and puncture (CLP), effects that can be reversed by the α_2 -AR antagonist yohimbine (Item No. 19869).² Dexmedetomidine (40 $\mu\text{g}/\text{kg}$) induces sedation and decreases mechanical nociception in cats.³ Formulations containing dexmedetomidine have been used as sedatives. This product is also available as an analytical reference standard (Item No. 38806).

References

1. Ross, T.M., Jetter, M.C., McDonnell, M.E., *et al.* α_2 Adrenoceptor agonists as potential analgesic agents. 2. Discovery of 4-(4-imidazo)-1,3-dimethyl-6,7-dihydro-thianaphthene as a high-affinity ligand for the $\alpha_2\text{D}$ adrenergic receptor. *J. Med. Chem.* **43(7)**, 1423-1426 (2000).
2. Wang, C., Yuan, W., Hu, A., *et al.* Dexmedetomidine alleviated sepsis-induced myocardial ferroptosis and septic heart injury. *Mol. Med. Rep.* **22(1)**, 175-184 (2020).
3. Nagore, L., Soler, C., Gil, L., *et al.* Sedative effects of dexmedetomidine, dexmedetomidine-pethidine and dexmedetomidine-butorphanol in cats. *J. Vet. Pharmacol. Ther.* **6(3)**, 222-228 (2013).

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

Buyer agrees to purchase the material subject to Cayman's Terms and Conditions. Complete Terms and Conditions including Warranty and Limitation of Liability information can be found on our website.

Copyright Cayman Chemical Company, 02/12/2024

CAYMAN CHEMICAL

1180 EAST ELLSWORTH RD
ANN ARBOR, MI 48108 · USA

PHONE: [800] 364-9897

[734] 971-3335

FAX: [734] 971-3640

CUSTSERV@CAYMANCHEM.COM
WWW.CAYMANCHEM.COM