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Produktinformation



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Zellkultur & Verbrauchsmaterial



Diagnostik & molekulare Diagnostik



Laborgeräte & Service

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Lieferung & Zahlungsart

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Zuschläge

- Mindermengenzuschlag
- Trockeneiszuschlag
- Gefahrgutzuschlag
- Expressversand

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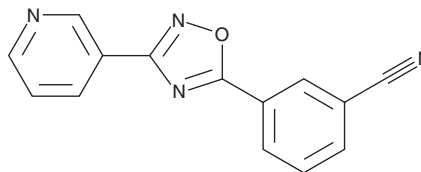
PRODUCT INFORMATION



NS 9283

Item No. 29189

CAS Registry No.: 913830-15-6
Formal Name: 3-[3-(3-pyridinyl)-1,2,4-oxadiazol-5-yl]-benzonitrile
MF: C₁₄H₈N₄O
FW: 248.2
Purity: ≥98%
UV/Vis.: λ_{max}: 223 nm
Supplied as: A crystalline 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

NS 9283 is supplied as a crystalline solid. A stock solution may be made by dissolving the NS 9283 in the solvent of choice, which should be purged with an inert gas. NS 9283 is soluble in organic solvents such as DMSO and dimethyl formamide (DMF). The solubility of NS 9283 in these solvents is approximately 3 and 10 mg/ml, respectively. NS 9283 is also slightly soluble in ethanol.

NS 9283 is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, NS 9283 should first be dissolved in DMF and then diluted with the aqueous buffer of choice. NS 9283 has a solubility of approximately 0.5 mg/ml in a 1:1 solution of DMF:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

NS 9283 is a positive allosteric modulator of α4β2 subunit-containing nicotinic acetylcholine receptors (nAChRs) that potentiates ACh-induced currents in HEK293 cells expressing human α4β2 subunit-containing nAChRs (EC₅₀ = 4 μM).¹ *In vivo*, NS 9283 potentiates ABT-594 (Item No. 22822) analgesic efficacy in rat models of carrageenan-induced thermal hyperalgesia, paw skin incision post-operative pain, and monoiodoacetate-induced osteoarthritis.² It reduces nicotine, but not sucrose, self-administration and reinstatement in rats when administered at a dose of 3.5 mg/kg.³

References

1. Grupe, M., Jensen, A.A., Ahring, P.K., *et al.* Unravelling the mechanism of action of NS9283, a positive allosteric modulator of (α4)₃(β2)₂ nicotinic ACh receptors. *Br. J. Pharmacol.* **168(8)**, 2000-2010 (2013).
2. Zhu, C.Z., Chin, C.-L., Rustay, N.R., *et al.* Potentiation of analgesic efficacy but not side effects: Co-administration of an α4β2 neuronal nicotinic acetylcholine receptor agonist and its positive allosteric modulator in experimental models of pain in rats. *Biochem. Pharmacol.* **82(8)**, 967-976 (2011).
3. Maurer, J.J., Sandager-Nielsen, K., and Schmidt, H.D. Attenuation of nicotine taking and seeking in rats by the stoichiometry-selective alpha4beta2 nicotinic acetylcholine receptor positive allosteric modulator NS9283. *Psychopharmacol. (Berl)*. **234(3)**, 475-484 (2017).

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.

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