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Produktinformation

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- Diagnostik & molekulare Diagnostik
- Laborgeräte & Service

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Lieferung & Zahlungsart

siehe unsere Liefer- und Versandbedingungen

Zuschläge

- Mindermengenzuschlag
- Trockeneiszuschlag
- Gefahrgutzuschlag
- Expressversand

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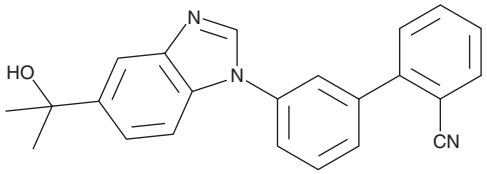
PRODUCT INFORMATION

NS 11394

Item No. 23872

CAS Registry No.:	951650-22-9
Formal Name:	3'-[5-(1-hydroxy-1-methylethyl)-1H-benzimidazol-1-yl]-[1,1'-biphenyl]-2-carbonitrile
MF:	$C_{23}H_{19}N_3O$
FW:	353.4
Purity:	≥98%
UV/Vis.:	λ_{max}: 251 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 11394 is supplied as a crystalline solid. A stock solution may be made by dissolving the NS 11394 in the solvent of choice. NS 11394 is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide, which should be purged with an inert gas. The solubility of NS 11394 in these solvents is approximately 33 mg/ml.

NS 11394 is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, NS 11394 should first be dissolved in ethanol and then diluted with the aqueous buffer of choice. NS 11394 has a solubility of approximately 0.16 mg/ml in a 1:5 solution of ethanol:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

NS 11394 is an orally bioavailable positive allosteric modulator of the $GABA_A$ receptor (K_i = 0.423 nM in rat cortical membranes).[1] It is selective for $GABA_A$ receptors containing α_1, α_2, α_3, or α_5 subunits (K_is = 0.41, 0.84, 0.497, and 0.119 nM, respectively) over receptors containing α_4 or α_6 subunits (K_is = 324 or 1,009 nM, respectively). In *X. laevis* oocytes, NS 11394 modulates GABA responses *via* receptors containing the subunits α_3 and α_5, with maximal potentiation rates of 52% and 78%, respectively, relative to diazepam (Item No. ISO60177). *In vivo*, NS 11394 inhibits the binding of [^{3}H]flunitrazepam to benzodiazepine receptors in the forebrain of mice and rats, with respective EC_{50} values of 0.38 and 1.3 mg/kg at 30 minutes and 0.49 and 0.69 mg/kg at 120 minutes following oral administration. NS 11394 (1-30 mg/kg) attenuates spontaneous nociceptive behaviors to formalin and capsaicin (Item No. 92350) injections in a rat model of neuropathic pain.[2]

References

1. Mirza, N.R., Larsen, J.S., Mathiasen, C., *et al*. NS11394 [3'-[5-(1-hydroxy-1-methyl-ethyl)-benzoimidazol-1-yl]-biphenyl-2-carbonitrile], a unique subtype-selective $GABA_A$ receptor positive allosteric modulator: In vitro actions, pharmacokinetic properties and in vivo anxiolytic efficacy. *J. Pharmacol. Exp. Ther.* **327(3)**, 954-968 (2008).
2. Muro, G., Lopez-Garcia, J.A., Rivera-Arconada, I., *et al*. Comparison of the novel subtype-selective $GABA_A$ receptor-positive allosteric modulator NS11394 [3'-[5-(1-hydroxy-1-methyl-ethyl)-benzoimidazol-1-yl]-biphenyl-2-carbonitrile] with diazepam, zolpidem, bretazenil, and gaboxadol in rat models of inflammatory and neuropathic pain. *J. Pharmacol. Exp. Ther.* **327(3)**, 969-981 (2008).

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