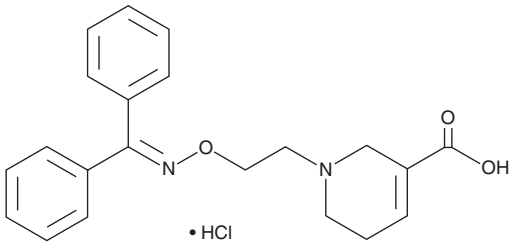
PRODUCT INFORMATION

NNC-711 (hydrochloride)

Item No. 29687

CAS Registry No.:	145645-62-1
Formal Name:	1-[2-[[(diphenylmethylene)amino]oxy]ethyl]-1,2,5,6-tetrahydro-3-pyridinecarboxylic acid, monohydrochloride
Synonyms:	NNC 05-711, NO-711
MF:	$C_{21}H_{22}N_2O_3$ • HCl
FW:	386.9
Purity:	≥98%
UV/Vis.:	λ_{max}: 258 nm
Supplied as:	A crystalline 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

NNC-711 (hydrochloride) is supplied as a crystalline solid. A stock solution may be made by dissolving the NNC-711 (hydrochloride) in the solvent of choice, which should be purged with an inert gas. NNC-711 (hydrochloride) is soluble in organic solvents such as DMSO. It is also soluble in water. The solubility of NNC-711 (hydrochloride) in water is approximately 10 mM. We do not recommend storing the aqueous solution for more than one day.

Description

NNC-711 is an inhibitor of GABA transporter 1 (GAT-1; IC_{50} = 0.04 µM for the human transporter).[1] It is selective for GAT-1 over human GAT-3 and BGT-3 (IC_{50}s = 1,700 and 622 µM, respectively), rat GAT-2 (IC_{50} = 171 µM), and a panel of 21 receptors and ion channels (IC_{50}s = >50 µM for all) in radioligand binding assays.[1,2] NNC-711 inhibits GABA uptake in rat synaptosome preparations, neurons, and glia (IC_{50}s = 47, 1,238, and 636 nM, respectively).[2] *In vivo*, NNC-711 inhibits clonic seizures induced by pentylenetetrazole (PTZ; Item No. 18682) or DMCM in mice (ED_{50}s = 1.2 and 3 mg/kg, respectively), as well as audiogenic tonic seizures in mice (ED_{50} = 0.23 mg/kg) and PTZ-induced tonic seizures in rats (ED_{50} = 1.7 mg/kg). Intrathecal administration of NNC-711 (100 or 200 µg/animal) decreases mechanical allodynia and thermal hyperalgesia in a rat model of neuropathic pain induced by chronic constriction injury (CCI).[3]

References

1. Borden, L.A., Murali Dhar, T.G., Smith, K.E., *et al.* Tiagabine, SK&F 89976-A, CI-966, and NNC-711 are selective for the cloned GABA transporter GAT-1. *Eur. J. Pharmacol.* **269(2)**, 219-224 (1994).
2. Suzdak, P.D., Frederiksen, K., Andersen, K.A., *et al.* NNC-711, a novel potent and selective γ-aminobutyric acid uptake inhibitor: Pharmacological characterization. *Eur. J. Pharmacol.* **224(2-3)**, 189-198 (1992).
3. Li, Y., Li, Y., Gu, P., *et al.* Analgesic effect of intrathecally γ-aminobutyric acid transporter-1 inhibitor NO-711 administrating on neuropathic pain in rats. *Neurosci. Lett.* **494(1)**, 6-9 (2011).

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