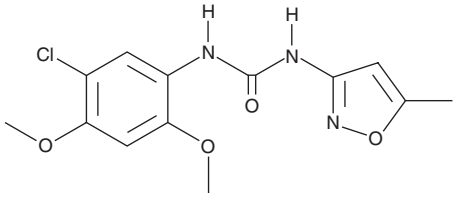
PRODUCT INFORMATION

PNU 120596

Item No. 14304

CAS Registry No.:	501925-31-1
Formal Name:	N-(5-chloro-2,4-dimethoxyphenyl)-N'-(5-methyl-3-isoxazolyl)-urea
Synonym:	NSC 216666
MF:	$C_{13}H_{14}ClN_3O_4$
FW:	311.7
Purity:	≥98%
UV/Vis.:	λ_{max}: 210, 254, 298 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

PNU 120596 is supplied as a crystalline solid. A stock solution may be made by dissolving the PNU 120596 in the solvent of choice, which should be purged with an inert gas. PNU 120596 is soluble in organic solvents such as DMSO and dimethyl formamide (DMF). The solubility of PNU 120596 in these solvents is approximately 20 and 30 mg/ml, respectively.

PNU 120596 is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, PNU 120596 should first be dissolved in DMF and then diluted with the aqueous buffer of choice. PNU 120596 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

PNU-120596 is a positive allosteric modulator of the α7 neuronal nicotinic acetylcholine receptor (nAChR), increasing agonist-evoked calcium flux (EC_{50} = 216 nM).[1] It has no detectable effect on α4β2, α3β4, or α9β10 nAChRs. PNU-120596 increases the frequency of ACh-evoked GABAergic postsynaptic currents in rat hippocampal slices and improves the auditory gating deficit caused by amphetamine in rats.[1,2] It also reduces the cortical/subcortical infarct volume caused by transient focal cerebral ischemia in rats.[3]

References

1. Hurst, R.S., Hajos, M., Raggenbass, M., *et al.* A novel positive allosteric modulator of the α7 neuronal nicotinic acetylcholine receptor: *In vitro* and *in vivo* characterization. *J. Neurosci.* **25(17)**, 4396-4405 (2015).
2. Timmermann, D.B., Gronlien, J.H., Kohlhaas, K.L., *et al.* An allosteric modulator of the α7 nicotinic acetylcholine receptor possessing cognition-enhancing properties *in vivo*. *JPET* **323(1)**, 294-307 (2007).
3. Kalappa, B.I., Sun, F., Johnson, S.R., *et al.* A positive allosteric modulator of α7 nAChRs augments neuroprotective effects of endogenous nicotinic agonists in cerebral ischaemia. *Brit. J. Pharmacol.* **169**, 1862-1878 (2013).

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