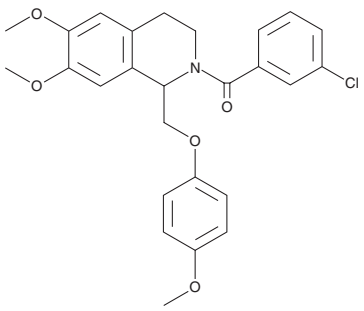
PRODUCT INFORMATION

CIQ

Item No. 17997



CAS Registry No.:	486427-17-2
Formal Name:	(3-chlorophenyl)[3,4-dihydro-6,7-dimethoxy-1-[(4-methoxyphenoxy) methyl]-2(1H)-isoquinolinyl]-methanone
MF:	$C_{26}H_{26}ClNO_5$
FW:	467.9
Purity:	≥98%
UV/Vis.:	λ_{max}: 284 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

CIQ is supplied as a crystalline solid. A stock solution may be made by dissolving the CIQ in the solvent of choice, which should be purged with an inert gas. CIQ is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). The solubility of CIQ in these solvents is approximately 0.2, 25, and 30 mg/ml, respectively.

CIQ is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, CIQ should first be dissolved in DMF and then diluted with the aqueous buffer of choice. CIQ has a solubility of approximately 0.2 mg/ml in a 1:4 solution of DMF:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

CIQ is a substituted tetrahydroisoquinoline that acts as a subunit-selective potentiator of NR2C- and NR2D-containing NMDA receptors.[1] It is without effect at subunits NR2A, NR2B, or glutamate receptors. CIQ enhances receptor responses two-fold (EC_{50} = 3 µM) by increasing channel opening frequency for glutamate or glycine.[1] It is a positive allosteric modulator that does not alter agonist EC_{50} values.[2,3]

References

1. Mullasseril, P., Hansen, K.B., Vance, K.M., *et al.* A subunit-selective potentiator of NR2C- and NR2D-containing NMDA receptors. *Nat. Commun.* **1(90)**, 1-20 (2010).
2. Monaghan, D.T., Irvine, M.W., Costa, B.M., *et al.* Pharmacological modulation of NMDA receptor activity and the advent of negative and positive allosteric modulators. *Neurochem Int.* **61(4)**, 581-592 (2012).
3. Hackos, D.H. and Hanson, J.E. Diverse modes of NMDA receptor positive allosteric modulation: Mechanisms and consequences. *Neuropharmacology* **112(Pt A)**, 34-45 (2017).

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