

Product Name: DS2

Catalog No.: 3679

Batch No.: 2

CAS Number: 374084-31-8

IUPAC Name: 4-Chloro-*N*-[2-(2-thienyl)imidazo[1,2-*a*]pyridin-3-yl]benzamide

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: C₁₈H₁₂ClN₃OS.¼H₂O

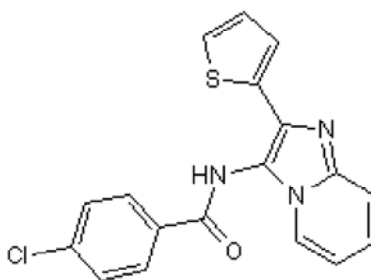
Batch Molecular Weight: 358.33

Physical Appearance: Beige solid

Solubility: DMSO to 50 mM

Storage: Desiccate at +4°C

Batch Molecular Structure:



2. ANALYTICAL DATA

HPLC: Shows 99.8% purity

¹H NMR: Consistent with structure

Mass Spectrum: Consistent with structure

Microanalysis:

	Carbon Hydrogen Nitrogen		
Theoretical	60.34	3.52	11.73
Found	60.65	3.44	11.79

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Description:

Positive allosteric modulator of GABA_A receptors. Potentiates GABA-evoked currents mediated by $\alpha 4\beta 3\delta$ receptors (EC_{50} = 142 nM, in vitro). Displays complex selectivity profile, with selectivity for δ -containing receptors ($\alpha 4/6\beta x\delta > \alpha 1\beta x\delta >> \gamma 2 > \alpha 4\beta 3$ GABA_A receptors). Enhances tonic currents of thalamocortical neurons in wild-type mice.

Physical and Chemical Properties:

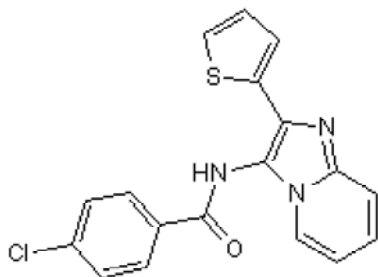
Batch Molecular Formula: C₁₈H₁₂ClN₃OS.¼H₂O

Batch Molecular Weight: 358.33

Physical Appearance: Beige solid

Minimum Purity: >97%

Batch Molecular Structure:



References:

Ahring *et al* (2016) A pharmacological assessment of agonists and modulators at $\alpha 4\beta 2\gamma 2$ and $\alpha 4\beta 2\delta$ GABA_A receptors: The challenge in comparing apples with oranges. *Pharmacol.Res.* **111** 563. PMID: 27178730 .

Jensen *et al* (2013) A study of subunit selectivity, mechanism and site of action of the delta selective compound 2 (DS2) at human recombinant and rodent native GABA_A receptors. *Br.J.Pharmacol.* **168** 1118. PMID: 23061935.

Wafford *et al* (2009) Novel compounds selectively enhance δ subunit containing GABA_A receptors and increase tonic currents in thalamus. *Neuropharmacology* **56** 182. PMID: 18762200.

Storage: Desiccate at +4°C

Solubility & Usage Info:

DMSO to 50 mM

Stability and Solubility Advice:

Some solutions can be difficult to obtain and can be encouraged by rapid stirring, sonication or gentle warming (in a 45-60°C water bath).

Information concerning product stability, particularly in solution, has rarely been reported and in most cases we can only offer a general guide. Our standard recommendations are:

SOLIDS: Provided storage is as stated on the product label and the vial is kept tightly sealed, the product can be stored for up to 6 months from date of receipt.

SOLUTIONS: We recommend that stock solutions, once prepared, are stored aliquoted in tightly sealed vials at -20°C or below and used within 1 month. Wherever possible solutions should be made up and used on the same day.

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