

Certificate of Analysis

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Product Name: M 084 hydrochloride

Catalog No.: 5807

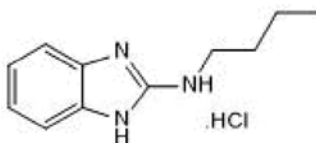
Batch No.: 1

CAS Number: 1992047-63-8

IUPAC Name: *N*-Butyl-1*H*-benzimidazol-2-amine hydrochloride

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: C₁₁H₁₅N₃.HCl
Batch Molecular Weight: 225.72
Physical Appearance: Off White solid
Solubility: water to 100 mM
DMSO to 100 mM
ethanol to 100 mM
Storage: Desiccate at RT
Batch Molecular Structure:



2. ANALYTICAL DATA

TLC: R_f = 0.19 (Dichloromethane:Methanol:Ammonia soln. [95:5])
HPLC: Shows 99.9% purity
¹H NMR: Consistent with structure
Mass Spectrum: Consistent with structure

Microanalysis:

	Carbon	Hydrogen	Nitrogen
Theoretical	58.3	7.14	18.62
Found	58.48	6.92	18.63

Caution - Not Fully Tested • Research Use Only • Not For Human or Veterinary Use

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IUPAC Name: *N*-Butyl-1*H*-benzimidazol-2-amine hydrochloride

Description:

TRPC4/5 channel blocker (IC₅₀ values are 3.7-10.3 and 8.2 μM, respectively). Also weakly blocks TRPC3 channels. Exhibits rapid antidepressant and anxiolytic effects in vivo.

Physical and Chemical Properties:

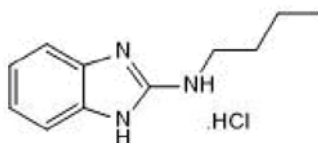
Batch Molecular Formula: C₁₁H₁₅N₃.HCl

Batch Molecular Weight: 225.72

Physical Appearance: Off White solid

Minimum Purity: ≥99%

Batch Molecular Structure:



Storage: Desiccate at RT

Solubility & Usage Info:

water to 100 mM

DMSO to 100 mM

ethanol to 100 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.

References:

Yang *et al* (2015) Acute treatment with a novel TRPC4/C5 channel inhibitor produces antidepressant and anxiolytic-like effects in mice. *PLoS One* **10** e0136255. PMID: 26317356.

Zhu *et al* (2015) Identification and optimization of 2-aminobenzimidazole derivatives as novel inhibitors of TRPC4 and TRPC5 channels. *Br.J.Pharmacol.* **172** 3495. PMID: 25816897.

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