

Certificate of Analysis

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Product Name: NAB 2

Catalog No.: 5131

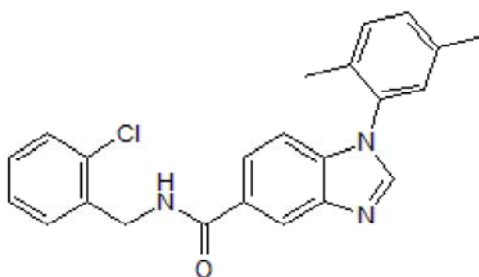
Batch No.: 2

CAS Number: 1504588-00-4

IUPAC Name: *N*-[(2-Chlorophenyl)methyl]-1-(2,5-dimethylphenyl)-1*H*-benzimidazole-5-carboxamide

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: C₂₃H₂₀ClN₃O
Batch Molecular Weight: 389.88
Physical Appearance: Off-white solid
Solubility: DMSO to 100 mM
 ethanol to 100 mM
Storage: Store at +4°C
Batch Molecular Structure:



2. ANALYTICAL DATA

TLC: R_f = 0.6 (Chloroform:Methanol [95:5])
HPLC: Shows 99.4% purity
¹H NMR: Consistent with structure
Mass Spectrum: Consistent with structure
Microanalysis:

	Carbon	Hydrogen	Nitrogen
Theoretical	70.85	5.17	10.78
Found	70.89	5.14	10.83

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

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Product Information

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IUPAC Name: *N*-[(2-Chlorophenyl)methyl]-1-(2,5-dimethylphenyl)-1*H*-benzimidazole-5-carboxamide

Description:

NAB 2 protects against α -synuclein toxicity. NAB 2 reverses the α -synuclein-induced pathological phenotype in Parkinson's disease cortical neurons. NAB 2 promotes E3 ubiquitin ligase Rsp5/Nedd4-dependent endosomal transport.

Physical and Chemical Properties:

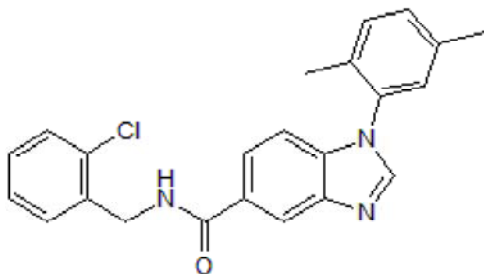
Batch Molecular Formula: C₂₃H₂₀ClN₃O

Batch Molecular Weight: 389.88

Physical Appearance: Off-white solid

Minimum Purity: ≥98%

Batch Molecular Structure:



Storage: Store at +4°C

Solubility & Usage Info:

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.

Licensing Information:

Sold under license from Whitehead Institute for Biomedical Research.

References:

Hatstat et al (2021) Characterization of small-molecule-induced changes in Parkinson's-related trafficking via the Nedd4 ubiquitin signaling cascade. *Cell Chem.Biol.* **28** 14. PMID: 33176158.

Chung et al (2013) Identification and rescue of α -synuclein toxicity in Parkinson patient-derived neurons. *Science* **342** 983. PMID: 24158904.

Tardiff et al (2013) Yeast reveal a "druggable" Rsp5/Nedd4 network that ameliorates α -synuclein toxicity in neurons. *Science* **342** 979. PMID: 24158909.

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