

Product Name: AC 1903

Catalog No.: 6766

Batch No.: 1

CAS Number: 831234-13-0

IUPAC Name: *N*-(2-Furanylmethyl)-1-(phenylmethyl)-1*H*-benzimidazol-2-amine

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: C₁₉H₁₇N₃O·¼H₂O

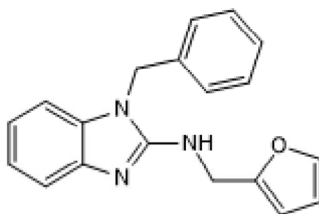
Batch Molecular Weight: 307.86

Physical Appearance: Brown solid

Solubility: DMSO to 50 mM

Storage: Store at -20°C

Batch Molecular Structure:



2. ANALYTICAL DATA

HPLC: Shows 99.7% purity

¹H NMR: Consistent with structure

Mass Spectrum: Consistent with structure

Microanalysis:

	Carbon	Hydrogen	Nitrogen
Theoretical	74.13	5.73	13.65
Found	74.02	5.57	13.67

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

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IUPAC Name: *N*-(2-Furanylmethyl)-1-(phenylmethyl)-1*H*-benzimidazol-2-amine

Description:

AC 1903 is a selective TRPC5 blocker (IC₅₀ = 4.0 - 13.6 μM). Also displays weak inhibition at TRPC4 (IC₅₀ >100 μM) but not TRPC6. Exhibits no effect against a standard panel of profiling kinases. Blocks TRPC5 channel activity in glomeruli of proteinuric rats. Suppresses severe proteinuria and prevents podocyte loss in a transgenic rat model of focal segmental glomerulosclerosis (FSGS).

Physical and Chemical Properties:

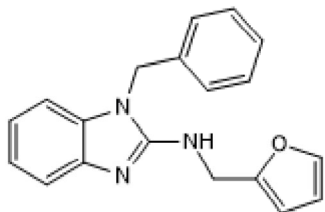
Batch Molecular Formula: C₁₉H₁₇N₃O.¼H₂O

Batch Molecular Weight: 307.86

Physical Appearance: Brown solid

Minimum Purity: ≥98%

Batch Molecular Structure:



Storage: Store at -20°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. *Unless contradicted by product-specific protocols or instructions, our standard recommendations apply:

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:

Sharma et al (2019) Design, synthesis and characterization of novel N-heterocyclic-1-benzyl-1*H*-benzo[d]imidazole-2-amines as selective TRPC5 inhibitors leading to the identification of the selective compound, AC1903. *Bioorg.Med.Chem.Lett.* **29** 155. PMID: 30538066.

Minard et al (2018) Remarkable progress with small-molecule modulation of TRPC1/4/5 channels: implications for understanding the channels in health and disease. *Cells* **7** doi: 10.3390. PMID: 29865154.

Chung et al (2017) TRP'ing up chronic kidney disease. *Science* **358** 1256. PMID: 29217557.

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bio-techne.com

info@bio-techne.com

techsupport@bio-techne.com

North America

Tel: (800) 343 7475

China

info.cn@bio-techne.com

Tel: +86 (21) 52380373

Europe Middle East Africa

Tel: +44 (0)1235 529449

Rest of World

www.tocris.com/distributors

Tel:+1 612 379 2956