

Product Name: DPTIP

Catalog No.: 6903

Batch No.: 1

CAS Number: 351353-48-5

IUPAC Name: 2,6-Dimethoxy-4-[4-phenyl-5-(2-thienyl)-1H-imidazol-2-yl]phenol

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: C₂₁H₁₈N₂O₃S.H₂O

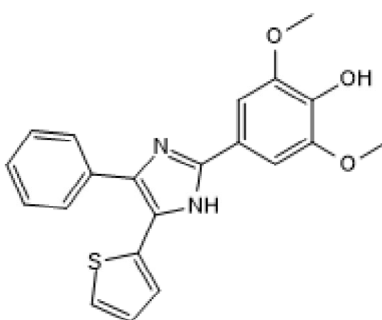
Batch Molecular Weight: 396.47

Physical Appearance: Purple solid

Solubility: DMSO to 100 mM

Storage: Store at -20°C

Batch Molecular Structure:



2. ANALYTICAL DATA

HPLC: Shows 97.7% purity

¹H NMR: Consistent with structure

Mass Spectrum: Consistent with structure

Microanalysis:

| | Carbon | Hydrogen | Nitrogen |
|-------------|--------|----------|----------|
| Theoretical | 63.62 | 5.08 | 7.07 |
| Found | 63.45 | 4.74 | 7.03 |

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

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

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Description:

DPTIP is a potent and selective sphingomyelin phosphodiesterase (N-SMase2) inhibitor ($IC_{50} = 30$ nM). Exhibits no inhibition of related enzymes alkaline phosphatase, phosphomonoesterase or acid sphingomyelinase. Inhibits extracellular vesicle (EV) release in primary astrocyte cultures and in vivo. Attenuates IL-1 β -induced astrocyte-derived EV release in a mouse model of brain injury and suppresses infiltration of immune cells into the brain. Metabolically stable and brain penetrant.

Physical and Chemical Properties:

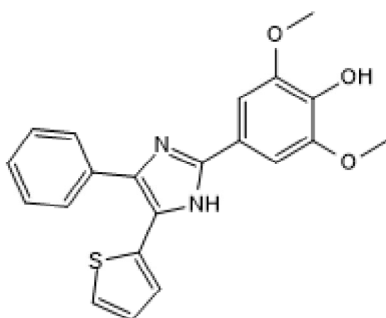
Batch Molecular Formula: C₂₁H₁₈N₂O₃S.H₂O

Batch Molecular Weight: 396.47

Physical Appearance: Purple solid

Minimum Purity: $\geq 97\%$

Batch Molecular Structure:



References:

Rojas et al (2018) DPTIP, a newly identified potent brain penetrant neutral sphingomyelinase 2 inhibitor, regulates astrocyte-peripheral immune communication following brain inflammation. *Sci.Rep.* **8** 17715. PMID: 30531925.

Storage: Store at -20°C

CAUTION - This product is light sensitive and we recommend that the solid material and any solutions obtained are protected from exposure to light.

Solubility & Usage Info:

DMSO 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. *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.

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techsupport@bio-techne.com

North America

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China

info.cn@bio-techne.com
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Europe Middle East Africa

Tel: +44 (0)1235 529449

Rest of World

www.tocris.com/distributors
Tel:+1 612 379 2956