

# Certificate of Analysis

[www.tocris.com](http://www.tocris.com)

**Product Name:** M4K2163 dihydrochloride

**Catalog No.:** 7754

**Batch No.:** 1

CAS Number: 2863635-04-3

IUPAC Name: 1-[4-[5-(4-Fluoro-3,5-dimethoxyphenyl)-4-methyl-3-pyridinyl]phenyl]piperazine dihydrochloride

## 1. PHYSICAL AND CHEMICAL PROPERTIES

**Batch Molecular Formula:** C<sub>24</sub>H<sub>26</sub>FN<sub>3</sub>O<sub>2</sub>·2HCl·1½H<sub>2</sub>O

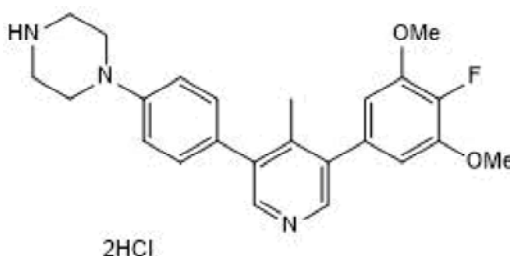
**Batch Molecular Weight:** 507.43

**Physical Appearance:** Pale yellow solid

**Solubility:** water to 100 mM  
DMSO to 100 mM

**Storage:** Store at -20°C

**Batch Molecular Structure:**



## 2. ANALYTICAL DATA

**HPLC:** Shows 98.3% purity

**<sup>1</sup>H NMR:** Consistent with structure

**Mass Spectrum:** Consistent with structure

**Microanalysis:**

	Carbon	Hydrogen	Nitrogen
Theoretical	56.81	6.16	8.28
Found	55.55	6.06	8.16

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](http://www.tocris.com/distributors)

Tel: +1 612 379 2956

**Product Name:** M4K2163 dihydrochloride

**Catalog No.:** 7754

**1**

CAS Number: 2863635-04-3

IUPAC Name: 1-[4-[5-(4-Fluoro-3,5-dimethoxyphenyl)-4-methyl-3-pyridinyl]phenyl]piperazine dihydrochloride

**Description:**

M4K2163 is a potent and selective activin receptor-like kinase 2 (ALK2) inhibitor (IC<sub>50</sub> values are 19 nM in vivo and 98 nM in vitro). Orally bioavailable and brain penetrant.

**Physical and Chemical Properties:**

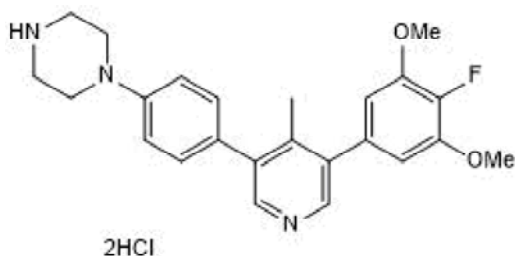
Batch Molecular Formula: C<sub>24</sub>H<sub>26</sub>FN<sub>3</sub>O<sub>2</sub>·2HCl·1½H<sub>2</sub>O

Batch Molecular Weight: 507.43

Physical Appearance: Pale yellow solid

**Minimum Purity:** ≥98%

**Batch Molecular Structure:**



**Storage:** Store at -20°C

**Solubility & Usage Info:**

water to 100 mM

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. 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:**

**Rooney and Jones** (2021) Recent advances in ALK2 inhibitors. ACS Omega **6** 20729. PMID: 34423181.

**Smil et al** (2020) Leveraging an open science drug discovery model to develop CNS-penetrant ALK2 inhibitors for the treatment of diffuse intrinsic pontine glioma. J.Med.Chem. **63** 10061. PMID: 32787083.

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