bio-techne
TOCRIS

Print Date: Feb 25th 2025

Certificate of Analysis

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Product Name: **MU 1700 trihydrochloride** **Catalog No.: 8832** **Batch No.: 1**

IUPAC Name: 6-(4-Piperazin-1-ylphenyl)-3-quinolin-4-ylfuro[3,2-*b*]pyridine trihydrochloride

1. PHYSICAL AND CHEMICAL PROPERTIES

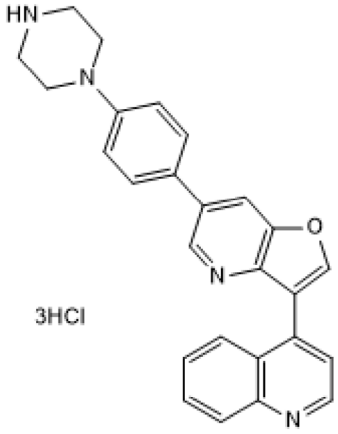
Batch Molecular Weight: 556.39

Physical Appearance: Orange solid

Solubility: DMSO to 10 mM
water to 50 mM

Storage: Store at -20°C

Batch Molecular Structure:



2. ANALYTICAL DATA

HPLC: Shows 99.2% purity

^{1}H NMR: Consistent with structure

Mass Spectrum: Consistent with structure

Microanalysis:

	Carbon	Hydrogen	Nitrogen	Chlorine
Theoretical	56.13	5.34	10.07	19.11
Found	55.55	5.32	9.87	19.11

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Description:

MU 1700 trihydrochloride is a potent and selective ALK2 and ALK1 inhibitor (IC_{50} values are 6 nM and 13 nM, respectively in biochemical assays). It is also a potent ALK6 inhibitor (IC_{50} = 41 nM). It shows selectivity for ALK over >360 other kinases. It shows favorable pharmacokinetic for in vivo use. MU 1700 trihydrochloride is orally bioavailable. It is cell membrane permeable and brain penetrant.

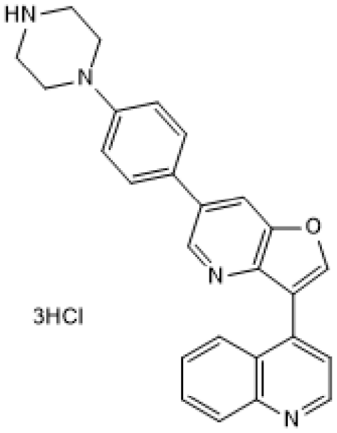
Physical and Chemical Properties:

Batch Molecular Weight: 556.39

Physical Appearance: Orange solid

Minimum Purity: ≥98%

Batch Molecular Structure:



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 10 mM

water to 50 mM

This compound is hygroscopic and may absorb atmospheric moisture during prolonged storage, causing the solid to become sticky and/or collapse into a gel or glass-like form. Although purity is unaffected, it may be difficult to extract the full quantity from the vial. In such a situation, we recommend that solutions are made by adding solvent directly to the vial. The vial should then be vortexed vigorously to ensure the product has completely dissolved.

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.

Licensing Information:

This probe is supplied in conjunction with the Structural Genomics Consortium. For further characterization details, please visit the MU 1700 probe summary on the SGC website.

References:

Němec *et al* (2024) Discovery of two highly selective structurally orthogonal chemical probes for activin receptor-like kinases 1 and 2. J.Med.Chem. ***67*** 12632. PMID: 39023313.

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