TOCRIS
a bio-techne brand

Print Date: Jan 4th 2022

Certificate of Analysis

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Product Name: **MO-I-500** **Catalog No.: 6871** **Batch No.: 1**

CAS Number: 1585219-04-0

IUPAC Name: *N*-[5-(4-Chlorophenyl)-3,4-dihydroxy-2-furanyl]ethanesulfonamide

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: $C_{12}H_{12}ClNO_5S$.

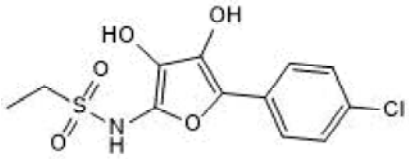
Batch Molecular Weight: 317.75

Physical Appearance: White solid

Solubility: DMSO to 100 mM

Storage: Store at -20°C

Batch Molecular Structure:



2. ANALYTICAL DATA

HPLC: Shows 99.1% purity

^{1}H NMR: Consistent with structure

Mass Spectrum: Consistent with structure

Microanalysis:

	Carbon	Hydrogen	Nitrogen
Theoretical	45.36	3.81	4.41
Found	45.54	3.77	4.49

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Description:

MO-I-500 is a FTO inhibitor (IC_{50} = 8.7 µM for purified FTO in vitro), which increases N^6-methyladenosine (m6A) levels in total cellular mRNA in HeLa cells. MO-I-500 modulates levels of specific miRNAs. In a triple-negative breast cancer cell line metabolically challenged by culture without glutamine (SUM149-MA cells), MO-I-500 inhibits cell proliferation. MO-I-500 also displays anticonvulsant activity in a 6 Hz mouse model of epilepsy at nontoxic doses.

Physical and Chemical Properties:

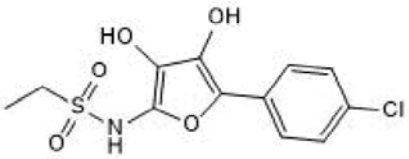
Batch Molecular Formula: $C_{12}H_{12}ClNO_5S$.

Batch Molecular Weight: 317.75

Physical Appearance: White solid

Minimum Purity: ≥98%

Batch Molecular Structure:



Storage: Store at -20°C

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. 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:

Singh *et al* (2016) Important role of FTO in the survival of rare panresistant triple-negative inflammatory breast cancer cells facing a severe metabolic challenge. PLoS One. ***11***. PMID: 27390851.

Zheng *et al* (2014) Synthesis of a FTO inhibitor with anticonvulsant activity. ACS.Chem.Neurosci. ***5*** 658. PMID: 24834807.