

**Product Name:** MO-I-500

**Catalog No.:** 6871

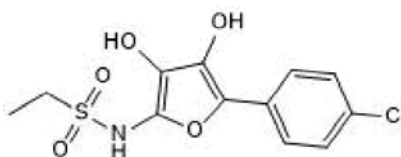
**Batch No.:** 1

CAS Number: 1585219-04-0

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

**1. PHYSICAL AND CHEMICAL PROPERTIES**

**Batch Molecular 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  
**<sup>1</sup>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

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

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**Description:**

MO-I-500 is a FTO inhibitor ( $IC_{50} = 8.7 \mu M$  for purified FTO in vitro), which increases N<sup>6</sup>-methyladenosine (m<sup>6</sup>A) 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.

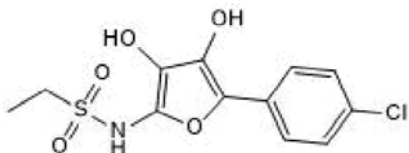
**Physical and Chemical Properties:**

Batch Molecular Weight: 317.75

Physical Appearance: White solid

**Minimum Purity:** ≥98%

**Batch Molecular Structure:**



**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.

**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.

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