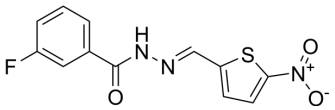
# MitoBloCK-10

| | |
|---|---|
| **Cat. No.:** | HY-115467 |
| **CAS No.:** | 394694-98-5 |
| **Molecular Formula:** | $C_{12}H_8FN_3O_3S$ |
| **Molecular Weight:** | 293.27 |
| **Target:** | HSP |
| **Pathway:** | Cell Cycle/DNA Damage; Metabolic Enzyme/Protease |
| **Storage:** | Powder -20°C 3 years<br>4°C 2 years<br>In solvent -80°C 2 years<br>-20°C 1 year |



## SOLVENT & SOLUBILITY

**In Vitro**

DMSO : 125 mg/mL (426.23 mM; Need ultrasonic)

**Preparing Stock Solutions**

| Solvent / Mass / Concentration | 1 mg | 5 mg | 10 mg |
|---|---|---|---|
| 1 mM | 3.4098 mL | 17.0491 mL | 34.0983 mL |
| 5 mM | 0.6820 mL | 3.4098 mL | 6.8197 mL |
| 10 mM | 0.3410 mL | 1.7049 mL | 3.4098 mL |

Please refer to the solubility information to select the appropriate solvent.

**In Vivo**

1. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
   Solubility: 2.08 mg/mL (7.09 mM); Suspended solution; Need ultrasonic

## BIOLOGICAL ACTIVITY

**Description**

MitoBloCK-10 (MB-10) is the first small molecule modulator to attenuate protein-associated motor (PAM) complex activity. MitoBloCK-10 (MB-10) inhibits Tim44 (C-terminal domain) binding to the precursor and to Hsp70[1].

**In Vitro**

MB-10 (100 μM) is a potential attenuator of protein import into mitochondria[1].
?MB-10 inhibits the import of substrates that use the TIM23 import pathway[1].
?MB-10 (0-100 μM) inhibits protein import into mammalian mitochondria[1].
MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Cell Viability Assay[1]

| | |
|---|---|
| Cell Line: | A plasmid expressing Su9-Ura3-myc was integrated at the LEU2 locus in WT and tim23-2 strains. |

| | |
|---|---|
| Concentration: | 100 μM. |
| Incubation Time: | 30 min. |
| Result: | WT strain expressing Su9-Ura3 failed to grow, whereas the tim23-2 mutant expressing Su9-Ura3 grew much faster. The strains grew at a similar rate when the medium was supplemented with uracil. |

Cell Viability Assay[1]

| | |
|---|---|
| Cell Line: | HeLa cells. |
| Concentration: | 0-100 μM. |
| Incubation Time: | 24 h. |
| Result: | Inhibited HeLa cells vibility, with an $IC_{50}$ of 17.2 μM. |

## CUSTOMER VALIDATION

- bioRxiv. 2023 Feb 26.

See more customer validations on www.MedChemExpress.com

## REFERENCES

[1]. Non Miyata, et al. Adaptation of a Genetic Screen Reveals an Inhibitor for Mitochondrial Protein Import Component Tim44. J Biol Chem. 2017 Mar 31;292(13):5429-5442.



Tel: 609-228-6898 Fax: 609-228-5909 E-mail: tech@MedChemExpress.com
Address: 1 Deer Park Dr, Suite Q, Monmouth Junction, NJ 08852, USA