bio-techne
TOCRIS

Print Date: Oct 9th 2023

# Certificate of Analysis

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**Product Name:** **CTPI 2** **Catalog No.: 7794** **Batch No.: 1**

CAS Number: 68003-38-3

IUPAC Name: 2-[[(4-Chloro-3-nitrophenyl)sulfonyl]amino]benzoic acid

## 1. PHYSICAL AND CHEMICAL PROPERTIES

**Batch Molecular Formula:** $C_{13}H_9ClN_2O_6S$.

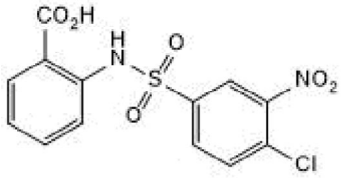
**Batch Molecular Weight:** 356.74

**Physical Appearance:** Beige solid

**Solubility:** DMSO to 100 mM
ethanol to 20 mM

**Storage:** Store at -20°C

**Batch Molecular Structure:**




## 2. ANALYTICAL DATA

**HPLC:** Shows 99.3% purity

**$^1$H NMR:** Consistent with structure

**Mass Spectrum:** Consistent with structure

**Microanalysis:**

| | Carbon | Hydrogen | Nitrogen |
|---|---|---|---|
| Theoretical | 43.77 | 2.54 | 7.85 |
| Found | 43.98 | 2.42 | 7.73 |



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IUPAC Name: 2-[[(4-Chloro-3-nitrophenyl)sulfonyl]amino]benzoic acid

**Description:**

CTPI 2 is a selective mitochondrial citrate transporter (SLC25A1) inhibitor with a $K_D$ of 3.5 µM. CTPI 2 inhibits the proliferation of H1299 cells in a SLC25A1-dependent manner. It also re-sensitizes T1, T2, and T4 cells to Cisplatin (Cat. No. 2251). CTPI 2 inhibits tumor growth in in vivo models of non-small cell lung cancer (NSCLC). In high-fat diet fed mice CTPI 2 regulates glycolysis, prevents steatohepatitis and normalizes glucose tolerance and insulin sensitivity. CTPI 2 influences the inflammatory pathway by inhibiting IL-6 and TNFα production and M1 macrophage polarization.

**Physical and Chemical Properties:**

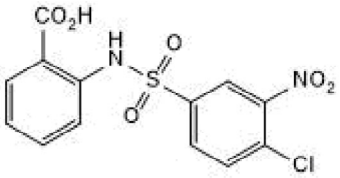
Batch Molecular Formula: $C_{13}H_9ClN_2O_6S$.

Batch Molecular Weight: 356.74

Physical Appearance: Beige 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 100 mM
ethanol to 20 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. *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.

**References:**

**Batchuluun** *et al* (2022) Lipogenesis inhibitors: therapeutic opportunities and challenges. Nat.Rev.Drug Discov. ***21*** 283. PMID: 35031766.

**Tan** *et al* (2020) Inhibition of the mitochondrial citrate carrier, Slc25a1, reverts steatosis, glucose intolerance, and inflammation in preclinical models of NAFLD/NASH. Cell Death Differ. ***27*** 2143. PMID: 31959914.

**Fernandez** *et al* (2018) The mitochondrial citrate carrier, SLC25A1, drives stemness and therapy resistance in non-small cell lung cancer. Cell Death Differ. ***25*** 1239. PMID: 29651165.