Print Date: Nov 8th 2022

Certificate of Analysis

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Product Name: **IOX 1** **Catalog No.: 4464** **Batch No.: 1**

CAS Number: 5852-78-8

IUPAC Name: 8-Hydroxy-5-quinolinecarboxylic acid

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: $C_{10}H_7NO_3$

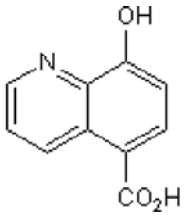
Batch Molecular Weight: 189.17

Physical Appearance: Yellow solid

Solubility: DMSO to 100 mM
1eq. NaOH to 100 mM

Storage: Store at +4°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	63.49	3.73	7.4
Found	63.57	3.7	7.27

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IUPAC Name: 8-Hydroxy-5-quinolinecarboxylic acid

Description:

IOX 1 is a histone demethylase JMJD inhibitor (IC_{50} values are 0.12, 0.17, 0.2, 0.3, 0.6 and 1 μM for JMJD3, JMJD1A, JMJD2A, JMJD2E, JMJD2C and UTX respectively). Cell permeable; it inhibits JMJD2A-mediated H3K9me3 demethylation in HeLa cells. IOX 1 suppresses IL-17 expression in mouse and human $CD4^+$ T cells by targeting TET2. It also reduces infiltration of Th17 cells in an in vivo model of intraocular inflammation.

Physical and Chemical Properties:

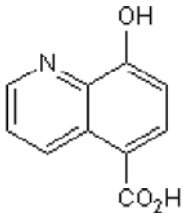
Batch Molecular Formula: $C_{10}H_7NO_3$

Batch Molecular Weight: 189.17

Physical Appearance: Yellow solid

Minimum Purity: ≥99%

Batch Molecular Structure:



Storage: Store at +4°C

Solubility & Usage Info:

DMSO to 100 mM
1eq. NaOH 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.

Licensing Information:

This compound is supplied in conjunction with the Structural Genomics Consortium. For further characterization details, please visit the IOX 1 summary on the SGC website.

References:

Hu *et al* (2022) Epigenetic drug screen identified IOX1 as an inhibitor of Th17-mediated inflammation through targeting TET2. EBioMedicine ***86*** 104333. PMID: 36335665.

King *et al* (2010) Quantitative high-throughput screening identifies 8-hydroxyquinolines as cell-active histone demethylase inhibitors. PLoS One. ***5*** e15535. PMID: 21124847.