Print Date: Jun 29th 2021

Certificate of Analysis

www.tocris.com

Product Name: **SCR7 pyrazine** **Catalog No.: 5342** **Batch No.: 2**

CAS Number: 14892-97-8

IUPAC Name: 2,3-Dihydro-6,7-diphenyl-2-thioxo-4(1*H*)-pteridinone

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: $C_{18}H_{12}N_4OS.1¾H_2O$

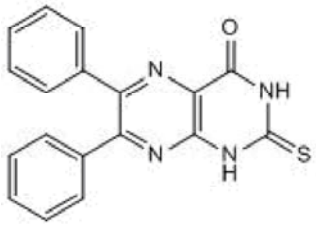
Batch Molecular Weight: 363.9

Physical Appearance: Yellow solid

Solubility: DMSO to 100 mM
ethanol to 20 mM

Storage: Store at +4°C

Batch Molecular Structure:



2. ANALYTICAL DATA

HPLC: Shows 99.4% purity

^{1}H NMR: Consistent with structure

Mass Spectrum: Consistent with structure

Microanalysis:

	Carbon	Hydrogen	Nitrogen
Theoretical	59.41	4.29	15.4
Found	59.06	4.34	15.09

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

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Product Information

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CAS Number: 14892-97-8

IUPAC Name: 2,3-Dihydro-6,7-diphenyl-2-thioxo-4(1*H*)-pteridinone

Description:

SCR7 pyrazine enhances CRISPR-Cas9-mediated homology-directed repair (HDR) efficiency in vitro up to 19-fold. Inhibits nonhomologous end-joining (NHEJ).

Physical and Chemical Properties:

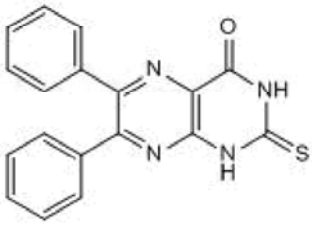
Batch Molecular Formula: $C_{18}H_{12}N_4OS.1¾H_2O$

Batch Molecular Weight: 363.9

Physical Appearance: Yellow solid

Minimum Purity: ≥98%

Batch Molecular Structure:



Storage: Store at +4°C

Solubility & Usage Info:

DMSO to 100 mM
ethanol to 20 mM

We have discovered that the commercially available SCR7 material supplied by other vendors does not match the chemical structure that it is being sold under. Through detailed chemical analysis carried out by our Analytical Quality Control experts, we believe that the commercially available SCR7 material, including that used in recent publications to enhance CRISPR efficiency, is in fact an analog of SCR7 that we have named 'SCR7 pyrazine'.

For further details please visit the SCR7 pyrazine product page on www.tocris.com.

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:

Greco *et al* (2016) SCR7 is neither a selective nor a potent inhibitor of human DNA ligase IV. DNA Repair (Amst) ***43*** 18. PMID: 27235626.

Greco *et al* (2016) Synthesis and structure determination of SCR7, a DNA ligase inhibitor Teterahedron Lett. ***57*** 3204.

Chu *et al* (2015) Increasing the efficiency of homology-directed repair for CRISPR-Cas9-induced precise gene editing in mammalian cells. Nat.Biotechnol. ***33*** 543. PMID: 25803306.

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