

Product Name: TAC

Catalog No.: 8825

Batch No.: 1

CAS Number: 666699-46-3

IUPAC Name: *N*-(3-Chloro-4-fluorophenyl)-4-fluoro-3,5-dimethylbenzenesulfonamide

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: C₁₄H₁₂ClF₂NO₂S

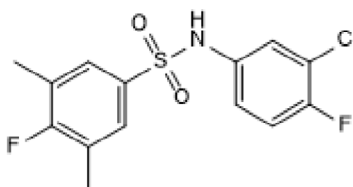
Batch Molecular Weight: 331.76

Physical Appearance: White solid

Solubility: DMSO to 100 mM
ethanol to 100 mM

Storage: Store at -20°C

Batch Molecular Structure:



2. ANALYTICAL DATA

HPLC: Shows 100.0% purity

¹H NMR: Consistent with structure

Mass Spectrum: Consistent with structure

Microanalysis:

	Carbon	Hydrogen	Nitrogen
Theoretical	50.68	3.65	4.22
Found	50.39	3.54	4.16

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

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IUPAC Name: *N*-(3-Chloro-4-fluorophenyl)-4-fluoro-3,5-dimethylbenzenesulfonamide

Description:

TAC is a telomerase reverse transcriptase (TERT) activator. TAC upregulates TERT gene transcription via the MEK/ERK/AP-1 cascade. In primary human cells and naturally aged mice, TAC enhances telomere synthesis, reduces tissue aging markers, cellular senescence, and inflammatory cytokines. In the brain, TAC induces neurogenesis, reduces neuroinflammation, and preserves cognitive function.

Physical and Chemical Properties:

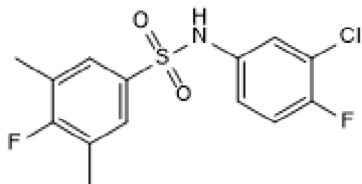
Batch Molecular Formula: C₁₄H₁₂ClF₂NO₂S

Batch Molecular Weight: 331.76

Physical Appearance: White solid

Minimum Purity: ≥98%

Batch Molecular Structure:



Storage: Store at -20°C

Solubility & Usage Info:

DMSO to 100 mM

ethanol 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. *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:

Shim et al (2024) TERT activation targets DNA methylation and multiple aging hallmarks. Cell **187** 4030. PMID: 38908367.

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