

Certificate of Analysis

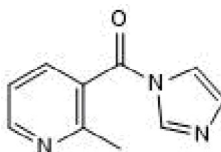
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Product Name: NAI
CAS Number: 1055970-47-2
IUPAC Name: 1*H*-Imidazol-1-yl(2-methyl-3-pyridinyl)methanone

Catalog No.: 7004 **Batch No.:** 2

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: C₁₀H₉N₃O
Batch Molecular Weight: 187.2
Physical Appearance: White solid
Solubility: DMSO to 2000 mM
Storage: Store at -20°C
Batch Molecular Structure:



2. ANALYTICAL DATA

¹H NMR: Consistent with structure
Mass Spectrum: Consistent with structure

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

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Description:

NAI is a reagent for RNA SHAPE-MaP experiments in live cells. Acylates the 2'-OH in RNA, labels single stranded or flexible regions more than folded regions (SHAPE methodology). Enables analysis of RNA secondary structures at single nucleotide resolution. Exhibits greater signals with lower background than 1M7 for in vivo measurement of the RNA structure. Also more stable than 1M7 in water. β-mercaptoethanol terminates reaction. Cell permeable.

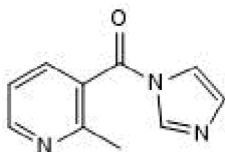
Physical and Chemical Properties:

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Solubility & Usage Info:

DMSO to 2000 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:

Lee *et al* (2017) Comparison of SHAPE reagents for mapping RNA structures inside living cells. *RNA* **23** 169. PMID: 27879433.

Kwok *et al* (2013) Determination of *in vivo* RNA structure in low-abundance transcripts. *Nat. Commun.* **4** 2971. PMID: 24336128.

Spitale *et al* (2013) RNA SHAPE analysis in living cells. *Nat. Chem. Biol.* **9** 18. PMID: 23178934.

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