

**Product Name:** 2A3

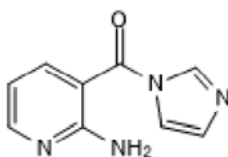
**Catalog No.:** 7376

**Batch No.:** 1

**IUPAC Name:** (2-Aminopyridin-3-yl)(1H-imidazol-1-yl)methanone

**1. PHYSICAL AND CHEMICAL PROPERTIES**

**Batch Molecular Formula:** C<sub>9</sub>H<sub>8</sub>N<sub>4</sub>O  
**Batch Molecular Weight:** 188.19  
**Physical Appearance:** White solid  
**Solubility:** DMSO to 100 mM  
**Storage:** Store at -20°C  
**Batch Molecular Structure:**



**2. ANALYTICAL DATA**

**<sup>1</sup>H NMR:** Consistent with structure  
**Mass Spectrum:** Consistent with structure

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**Description:**

2A3 is an electrophilic chemical probe that acylates the 2'-OH in RNA backbone. 2A3 can be used for RNA SHAPE-MaP experiments in cell lines or live bacteria. It labels single-stranded or flexible regions more than folded regions (SHAPE methodology); enables analysis of RNA secondary structures at single nucleotide resolution. For intracellular experiments, 2A3 has higher signal-to-noise ratio and prediction accuracy than NAI (Cat. No. 7004). 2A3 is cell permeable, and can probe both gram-positive and gram-negative bacteria.

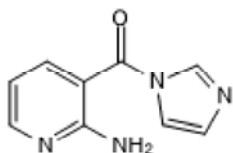
**Physical and Chemical Properties:**

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Physical Appearance: White solid

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**References:**

**Marinus et al** (2021) A novel SHAPE reagent enables the analysis of RNA structure in living cells with unprecedented accuracy. *Nucleic Acids Res.* **49** e34. PMID: 33398343.

**Storage:** Store at -20°C

**Solubility & Usage Info:**

DMSO 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:**

Sold with kind permission of Dr Danny Incarnato

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