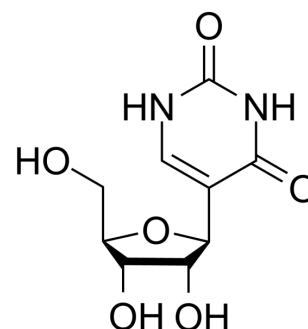


## Pseudouridine

|                           |                                                                            |       |          |
|---------------------------|----------------------------------------------------------------------------|-------|----------|
| <b>Cat. No.:</b>          | HY-113061                                                                  |       |          |
| <b>CAS No.:</b>           | 1445-07-4                                                                  |       |          |
| <b>Molecular Formula:</b> | C <sub>9</sub> H <sub>12</sub> N <sub>2</sub> O <sub>6</sub>               |       |          |
| <b>Molecular Weight:</b>  | 244.2                                                                      |       |          |
| <b>Target:</b>            | Endogenous Metabolite; Nucleoside Antimetabolite/Analog; DNA/RNA Synthesis |       |          |
| <b>Pathway:</b>           | Metabolic Enzyme/Protease; Cell Cycle/DNA Damage                           |       |          |
| <b>Storage:</b>           | Powder                                                                     | -20°C | 3 years  |
|                           |                                                                            | 4°C   | 2 years  |
|                           | In solvent                                                                 | -80°C | 6 months |
|                           |                                                                            | -20°C | 1 month  |



### SOLVENT & SOLUBILITY

#### In Vitro

DMSO : 125 mg/mL (511.88 mM; Need ultrasonic)  
 H<sub>2</sub>O : 25 mg/mL (102.38 mM; ultrasonic and warming and heat to 60°C)

|                              | Solvent<br>Concentration | Mass      |            |            |
|------------------------------|--------------------------|-----------|------------|------------|
|                              |                          | 1 mg      | 5 mg       | 10 mg      |
| Preparing<br>Stock Solutions | 1 mM                     | 4.0950 mL | 20.4750 mL | 40.9500 mL |
|                              | 5 mM                     | 0.8190 mL | 4.0950 mL  | 8.1900 mL  |
|                              | 10 mM                    | 0.4095 mL | 2.0475 mL  | 4.0950 mL  |

Please refer to the solubility information to select the appropriate solvent.

#### In Vivo

- Add each solvent one by one: PBS  
Solubility: 25 mg/mL (102.38 mM); Clear solution; Need ultrasonic
- Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline  
Solubility: ≥ 2.08 mg/mL (8.52 mM); Clear solution
- Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)  
Solubility: ≥ 2.08 mg/mL (8.52 mM); Clear solution
- Add each solvent one by one: 10% DMSO >> 90% corn oil  
Solubility: ≥ 2.08 mg/mL (8.52 mM); Clear solution

### BIOLOGICAL ACTIVITY

#### Description

Pseudouridine is an isomer of the nucleoside uridine, and the most abundant modified nucleoside in non-coding RNAs. Pseudouridine in rRNA and tRNA can fine-tune and stabilize the regional structure and help maintain their functions in mRNA decoding, ribosome assembly, processing and translation<sup>[1][2][3][4]</sup>.

---

| IC <sub>50</sub> & Target | Human Endogenous Metabolite | Human Endogenous Metabolite |
|---------------------------|-----------------------------|-----------------------------|
|---------------------------|-----------------------------|-----------------------------|

---

## REFERENCES

- [1]. M Charette, et al. Pseudouridine in RNA: what, where, how, and why. IUBMB Life. 2000 May;49(5):341-51.
- [2]. Junhui Ge, et al. RNA pseudouridylation: new insights into an old modification. Trends Biochem Sci. 2013 Apr;38(4):210-8.
- [3]. Anne C Rintala-Dempsey, et al. Eukaryotic stand-alone pseudouridine synthases - RNA modifying enzymes and emerging regulators of gene expression? RNA Biol. 2017 Sep 2;14(9):1185-1196.
- [4]. Carlile TM, et al. Pseudouridine profiling reveals regulated mRNA pseudouridylation in yeast and human cells. Nature. 2014 Nov 6;515(7525):143-6.
- 

**Caution: Product has not been fully validated for medical applications. For research use only.**

Tel: 609-228-6898

Fax: 609-228-5909

E-mail: [tech@MedChemExpress.com](mailto:tech@MedChemExpress.com)

Address: 1 Deer Park Dr, Suite Q, Monmouth Junction, NJ 08852, USA