



# SZABO SCANDIC

Part of Europa Biosite

## Produktinformation



Forschungsprodukte & Biochemikalien



Zellkultur & Verbrauchsmaterial



Diagnostik & molekulare Diagnostik



Laborgeräte & Service

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### Zuschläge

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- Trockeneiszuschlag
- Gefahrgutzuschlag
- Expressversand

### SZABO-SCANDIC HandelsgmbH

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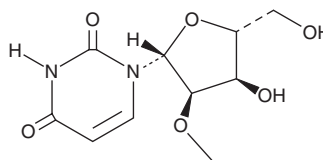
# PRODUCT INFORMATION



## 2'-O-Methyluridine

Item No. 36520

**CAS Registry No.:** 2140-76-3  
**Formal Name:** 2'-O-methyl-uridine  
**Synonyms:** 2'-O-methyl UR, 1-(2'-O-methyl-β-D-ribofuranosyl)-Uracil  
**MF:** C<sub>10</sub>H<sub>14</sub>N<sub>2</sub>O<sub>6</sub>  
**FW:** 258.2  
**Purity:** ≥98%  
**UV/Vis.:** λ<sub>max</sub>: 263 nm  
**Supplied as:** A solid  
**Storage:** -20°C  
**Stability:** ≥4 years



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

### Laboratory Procedures

2'-O-Methyluridine is supplied as a solid. A stock solution may be made by dissolving the 2'-O-methyluridine in the solvent of choice, which should be purged with an inert gas. 2'-O-Methyluridine is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). The solubility of 2'-O-methyluridine in DMSO is approximately 12 mg/ml and approximately 20 mg/ml in DMF. 2'-O-Methyluridine is slightly soluble in ethanol.

Further dilutions of the stock solution into aqueous buffers or isotonic saline should be made prior to performing biological experiments. Ensure that the residual amount of organic solvent is insignificant, since organic solvents may have physiological effects at low concentrations. Organic solvent-free aqueous solutions of 2'-O-methyluridine can be prepared by directly dissolving the solid in aqueous buffers. The solubility of 2'-O-methyluridine in PBS (pH 7.2) is approximately 10 mg/ml. We do not recommend storing the aqueous solution for more than one day.

### Description

2'-O-Methyluridine is a modified nucleoside that has been found in *T. thermophila* tRNA.<sup>1</sup> Incorporation of 2'-O-methyluridine into siRNA targeting the gene encoding apolipoprotein B (*ApoB*) decreases ApoB protein levels in HepG2 cells and prevents the production of IFN-α in isolated human peripheral blood mononuclear cells (PBMCs) compared with siRNA containing only native nucleosides.<sup>2</sup> Serum levels of 2'-O-methyluridine are decreased in patients with breast cancer.<sup>3</sup>

### References

1. Kuchino, Y., Hanyu, N., Tashiro, F., *et al.* *Tetrahymena thermophila* glutamine tRNA and its gene that corresponds to UAA termination codon. *Proc. Natl. Acad. Sci. USA* **82**(14), 4758-4762 (1985).
2. Judge, A.D., Bola, G., Lee, A.C.H., *et al.* Design of noninflammatory synthetic siRNA mediating potent gene silencing *in vivo*. *Mol. Ther.* **13**(3), 494-505 (2006).
3. Fang, Z., Hu, Y., Chen, J., *et al.* Mass spectrometry-based targeted serum monomethylated ribonucleosides profiling for early detection of breast cancer. *Front. Mol. Biosci.* **8**, 741603 (2021).

#### WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

#### SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

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