

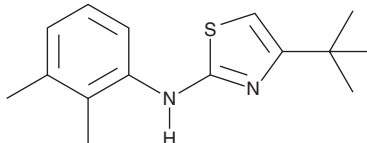
# PRODUCT INFORMATION



**O4I4**

Item No. 42088

**CAS Registry No.:** 412008-21-0  
**Formal Name:** 4-(1,1-dimethylethyl)-N-(2,3-dimethylphenyl)-2-thiazolamine  
**Synonym:** Oct4-inducing Compound 4  
**MF:** C<sub>15</sub>H<sub>20</sub>N<sub>2</sub>S  
**FW:** 260.4  
**Purity:** ≥95%  
**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

O4I4 is supplied as a solid. A stock solution may be made by dissolving the O4I4 in the solvent of choice, which should be purged with an inert gas. O4I4 is sparingly soluble (1-10 mg/ml) in DMSO and slightly soluble (0.1-1 mg/ml) in acetonitrile.

## Description

O4I4 is an inducer of octamer-binding transcription factor 4 (Oct4).<sup>1</sup> It is also an antagonist of chemokine (C-C motif) receptor 4 (CCR4; IC<sub>50</sub> = 0.26 μM).<sup>2</sup> O4I4 induces transactivation of Oct4 and Nanog in a reporter assays using NCCIT pluripotent stem cells.<sup>1</sup> It increases the lifespans of *C. elegans* and *Drosophila* when used at concentrations of 0.5 and 20 μM, respectively. O4I4, in combination with O4I3 and SOX2, Kruppel-like factor 4 (KLF4), L-Myc, and Lin28 (SKML), induces formation of three germ layers in teratomas in a mouse model of differentiation using human chemically induced PSCs.

## References

1. Kang, H., Hasselbeck, S., Taškova, K., *et al.* Development of a next-generation endogenous OCT4 inducer and its anti-aging effect in vivo. *Eur. J. Med. Chem.* 257, 115513 (2023).
2. Wang, X., Xu, F., Xu, Q., *et al.* Optimization of 2-aminothiazole derivatives as CCR4 antagonists. *Bioorg. Med. Chem. Lett.* **16**(10), 2800-2803 (2006).

### 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.

### WARRANTY AND LIMITATION OF REMEDY

Buyer agrees to purchase the material subject to Cayman's Terms and Conditions. Complete Terms and Conditions including Warranty and Limitation of Liability information can be found on our website.

Copyright Cayman Chemical Company, 09/25/2024

## CAYMAN CHEMICAL

1180 EAST ELLSWORTH RD  
ANN ARBOR, MI 48108 · USA

**PHONE:** [800] 364-9897  
[734] 971-3335

**FAX:** [734] 971-3640

CUSTSERV@CAYMANCHEM.COM  
[WWW.CAYMANCHEM.COM](http://WWW.CAYMANCHEM.COM)