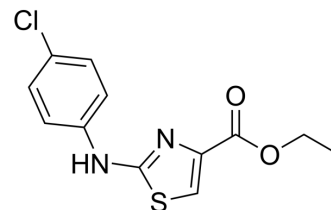


O412

Cat. No.:	HY-18772		
CAS No.:	165682-93-9		
Molecular Formula:	C ₁₂ H ₁₁ ClN ₂ O ₂ S		
Molecular Weight:	282.75		
Target:	Oct3/4		
Pathway:	Stem Cell/Wnt		
Storage:	Powder	-20°C	3 years
		4°C	2 years
	In solvent	-80°C	2 years
		-20°C	1 year



SOLVENT & SOLUBILITY

In Vitro

DMSO : ≥ 42 mg/mL (148.54 mM)
 * "≥" means soluble, but saturation unknown.

Preparing Stock Solutions	Solvent		1 mg	5 mg	10 mg
	Concentration	Mass			
	1 mM		3.5367 mL	17.6835 mL	35.3669 mL
	5 mM		0.7073 mL	3.5367 mL	7.0734 mL
	10 mM		0.3537 mL	1.7683 mL	3.5367 mL

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

In Vivo

1. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
 Solubility: 2.5 mg/mL (8.84 mM); Suspended solution; Need ultrasonic

BIOLOGICAL ACTIVITY

Description

O412 is a potent Oct3/4 inducer. O412 induces the expression of pluripotent-associated genes Lin28, Sox2 and Nanog, and suppresses Rex1^[1].

In Vitro

O412 not only promotes Oct3/4 expression by activating its promoter site, but also stabilize the Oct3/4 protein in HEK293 cells^[1].

O412 markedly stimulates Oct3/4 even at 5 μM after 72 hrs treatment on the translational level^[1].

O412 (20 μM) accumulates Oct3/4 in NCCIT occurred already 2 hrs after incubation, while the detectable Sox2 increase appears much later, implicating compound-mediated activation of Oct3/4 might be different between embryonic kidney HEK293 cells and embryonal carcinoma NCCIT cells^[1].

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Immunofluorescence^[1]

Cell Line:	HF (human fibroblasts) cells.
Concentration:	5-20 μ M.
Incubation Time:	5 days.
Result:	Successfully detected co-expression of Oct3/4 and Sox2, as well as Nanog and Klf4.

REFERENCES

[1]. Cheng X, et al. Ethyl 2-((4-Chlorophenyl)amino)thiazole-4-carboxylate and Derivatives Are Potent Inducers of Oct3/4. J Med Chem. 2015 Aug 13;58(15):5742-5750.

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

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