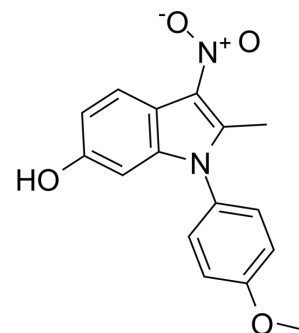


ID-8

Cat. No.:	HY-15838		
CAS No.:	147591-46-6		
Molecular Formula:	C ₁₆ H ₁₄ N ₂ O ₄		
Molecular Weight:	298.29		
Target:	DYRK		
Pathway:	Protein Tyrosine Kinase/RTK		
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 : ≥ 47 mg/mL (157.56 mM)
 * "≥" means soluble, but saturation unknown.

Preparing Stock Solutions	Solvent Concentration	Mass		
		1 mg	5 mg	10 mg
	1 mM	3.3524 mL	16.7622 mL	33.5244 mL
	5 mM	0.6705 mL	3.3524 mL	6.7049 mL
	10 mM	0.3352 mL	1.6762 mL	3.3524 mL

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

In Vivo

1. Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline
 Solubility: 2.5 mg/mL (8.38 mM); Suspended solution; Need ultrasonic

BIOLOGICAL ACTIVITY

Description

ID-8 is an inhibitor of dual-specificity tyrosine phosphorylation-regulated kinase (DYRK). ID-8 sustains embryonic stem cell (ESC) self-renewal and pluripotency. ID-8 enhances Wnt-mediated hESC survival and proliferation via inhibition of DYRKs^[1] [2].

IC₅₀ & Target

DYRK^[1]

In Vitro

ID-8 (0.1-10 μM) increases human embryonic stem cell (hESC) survival^[1].
 ID-8 (10 μM) stimulates ESCs proliferation in serum-free media for more than 1 month^[2].
 MCE has not independently confirmed the accuracy of these methods. They are for reference only.

CUSTOMER VALIDATION

- Cell Chem Biol. 2022 Aug 17;S2451-9456(22)00277-X.
- Stem Cell Rev Rep. 2022 Jan 26.
- Biochem Biophys Res Commun. 2020 Apr 2;524(2):280-287.
- Research Square Preprint. 2021 Sep.

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REFERENCES

- [1]. Hasegawa, K., et al., Wnt signaling orchestration with a small molecule DYRK inhibitor provides long-term xeno-free human pluripotent cell expansion. Stem Cells Transl Med, 2012. 1(1): p. 18-28.
- [2]. Miyabayashi, T., et al., Indole derivatives sustain embryonic stem cell self-renewal in long-term culture. Biosci Biotechnol Biochem, 2008. 72(5): p. 1242-8.
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Caution: Product has not been fully validated for medical applications. For research use only.

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