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Lieferung & Zahlungsart

siehe unsere Liefer- und Versandbedingungen

Zuschläge

- Mindermengenzuschlag
- Trockeneiszuschlag
- Gefahrgutzuschlag
- Expressversand

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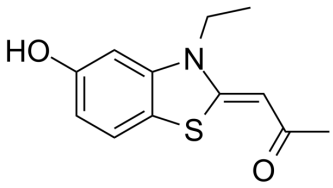
INDY

Cat. No.:	HY-108476
CAS No.:	1169755-45-6
Molecular Formula:	$C_{12}H_{13}NO_2S$
Molecular Weight:	235.3
Target:	DYRK
Pathway:	Protein Tyrosine Kinase/RTK
Storage:	Powder -20°C 3 years In solvent -80°C 6 months -20°C 1 month



SOLVENT & SOLUBILITY

In Vitro

DMSO : ≥ 33.33 mg/mL (141.65 mM)

* "≥" means soluble, but saturation unknown.

Preparing Stock Solutions	Mass / Solvent / Concentration	1 mg	5 mg	10 mg
	1 mM	4.2499 mL	21.2495 mL	42.4989 mL
	5 mM	0.8500 mL	4.2499 mL	8.4998 mL
	10 mM	0.4250 mL	2.1249 mL	4.2499 mL

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

In Vivo

1. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 2.5 mg/mL (10.62 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

INDY is a potent and ATP-competitive Dyrk1A and Dyrk1B inhibitor with IC_{50}s of 0.24 μM and 0.23 μM, respectively. INDY binds in the ATP pocket of the enzyme and has a K_i value of 0.18 μM for Dyrk1A. INDY sharply reduces the self-renewal capacity of normal and tumorigenic cells in primary Glioblastoma (GBM) cell lines and neural progenitor cells[1][2].

IC_{50} & Target

IC50: 0.24 μM (Dyrk1A) and 0.23 μM (Dyrk1B)[1]
Ki: 0.18 μM (Dyrk1A)[1]

In Vitro

INDY (0.3-30 μM; 20 hours) mildly inhibits tau-phosphorylation at 3 μM, and nearly completely inhibits at 30 μM[1].
INDY effectively reverses the aberrant tau-phosphorylation and rescues the repressed NFAT (nuclear factor of activated T cell) signalling induced by Dyrk1A (dual-specificity tyrosine-(Y)-phosphorylation-regulated kinase 1A) overexpression[1].
MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Western Blot Analysis[1]

Cell Line:	COS7 cells transfected with either EGFP-Dyrk1A and EGFP-tau
Concentration:	0.3, 1, 3, 10, 30 μM
Incubation Time:	20 hours
Result:	Mildly inhibited tau-phosphorylation at 3 μM, and nearly completely inhibited at 30 μM.

In Vivo

ProINDY (2.5 μM) recoveres apparently normal development of the Xenopus embryo[1].

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

CUSTOMER VALIDATION

- Nat Biomed Eng. 2022 Apr;6(4):403-420.
- STAR Protoc. 2022, 3(4): 101908.

See more customer validations on www.MedChemExpress.com

REFERENCES

[1]. Ogawa Y, et al. Development of a novel selective inhibitor of the Down syndrome-related kinase Dyrk1A. Nat Commun. 2010 Oct 5;1:86.

[2]. Pozo N, et al. Inhibition of DYRK1A destabilizes EGFR and reduces EGFR-dependent glioblastomagrowth. J Clin Invest. 2013 Jun;123(6):2475-87.

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