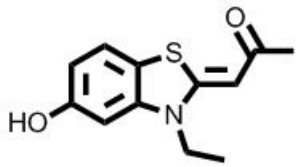
Xcess Biosciences Inc.
7144 N Harlem Ave #169
Chicago, IL 60631 USA

http://www.xcessbio.com
Toll free: 1-866-706-2330
Fax: 1-619- 810-0718
Email: info@xcessbio.com

DYRK1A/B Inhibitor - INDY

Chemical Name: (Z)-1-(3-ethyl-5-hydroxybenzo[d]thiazol-2(3H)-ylidene)propan-2-one



Molecular Weight:	235.30
Formula:	$C_{12}H_{13}NO_2S$
Purity:	≥98%
CAS#:	1169755-45-6
Solubility:	DMSO up to 100 mM
Storage	Powder: 4 °C 1 year DMSO: 4 °C 3 months -20 °C 1 year

Biological Activity:

INDY is a potent and selective DYRK1A/B inhibitor with IC_{50} of 0.23 and 0.24 μM for DYRK1B and DYRK1A respectively. It binds at the ATP-binding cleft of the enzyme, and reverses aberrant tau-phosphorylation and rescues repressed calcineurin/NFAT signaling. INDY can impair the self-renewal capacity of subventricular zone neural stem cells. INDY can also induce regeneration and expansion of both rat and adult human beta cells in vivo or ex vivo, and the nuclear factors of activated T cells (NFAT) family of transcription factors are defined as likely mediators of human beta cell proliferation and differentiation.

How to Use:

In vitro: INDY was used at 10-15 μM final concentration in various in vitro assays.

In vivo: n/a

Reference:

1. Ogawa Y, et al. Development of a novel selective inhibitor of the Down syndrome-related kinase Dyrk1A. (2010) Nat Commun. 1:86.
2. Pozo N, et al. Inhibition of DYRK1A destabilizes EGFR and reduces EGFR-dependent glioblastoma growth. (2013) J Clin Invest. 123(6):2475-87.
3. Wang P, at al. A high-throughput chemical screen reveals that harmine-mediated inhibition of DYRK1A increases human pancreatic beta cell replication. (2015) Nat Med. In press.