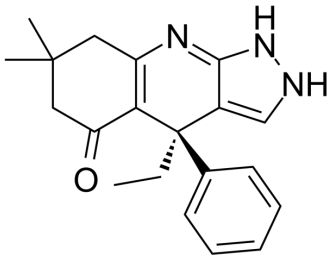
BRD5648

Cat. No.:	HY-116830B
CAS No.:	2056261-42-6
Molecular Formula:	$C_{20}H_{23}N_3O$
Molecular Weight:	321.42
Target:	GSK-3
Pathway:	PI3K/Akt/mTOR; 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 : 300 mg/mL (933.36 mM; Need ultrasonic)

Preparing Stock Solutions	Solvent / Mass / Concentration	1 mg	5 mg	10 mg
	1 mM	3.1112 mL	15.5560 mL	31.1119 mL
	5 mM	0.6222 mL	3.1112 mL	6.2224 mL
	10 mM	0.3111 mL	1.5556 mL	3.1112 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: ≥ 7.5 mg/mL (23.33 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

BRD5648 ((R)-BRD0705) is a negative control of BRD0705. BRD0705 is a potent, paralog selective and orally active GSK3α inhibitor with an IC_{50} of 66 nM and a K_d of 4.8 μM. BRD0705 displays increased selectivity for GSK3α (8-fold) versus GSK3β (IC_{50} of 515 nM). BRD0705 can be used for acute myeloid leukemia (AML)[1][2].

In Vitro

BRD5648, the inactive enantiomer of BRD0705, does not induce changes in enzyme phosphorylation or total β-catenin protein stabilization[1].

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

REFERENCES

[1]. Wagner FF, et al. Exploiting an Asp-Glu "switch" in glycogen synthase kinase 3 to design paralog-selective inhibitors for use in acute myeloid leukemia. Sci Transl Med. 2018 Mar 7;10(431). pii: eaam8460.

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