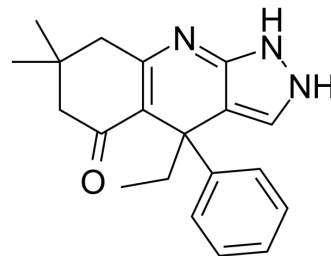


## (Rac)-BRD0705

Cat. No.:	HY-116830A		
CAS No.:	1597440-03-3		
Molecular Formula:	C <sub>20</sub> H <sub>23</sub> N <sub>3</sub> O		
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	6 months
		-20°C	1 month



### SOLVENT & SOLUBILITY

#### In Vitro

DMSO : 250 mg/mL (777.80 mM; Need ultrasonic)

Concentration	Solvent	Mass	1 mg	5 mg	10 mg
			1 mg	5 mg	10 mg
Preparing Stock Solutions	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

- Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline  
Solubility: ≥ 2.08 mg/mL (6.47 mM); Clear solution
- Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)  
Solubility: ≥ 2.08 mg/mL (6.47 mM); Clear solution
- Add each solvent one by one: 10% DMSO >> 90% corn oil  
Solubility: ≥ 2.08 mg/mL (6.47 mM); Clear solution

### BIOLOGICAL ACTIVITY

#### Description

(Rac)-BRD0705 is a less active racemate of BRD0705. BRD0705 is a potent, paralog selective and orally active GSK3α inhibitor with an IC<sub>50</sub> of 66 nM and a K<sub>d</sub> of 4.8 μM. BRD0705 displays increased selectivity for GSK3α (8-fold) versus GSK3β (IC<sub>50</sub> of 515 nM). BRD0705 can be used for acute myeloid leukemia (AML)<sup>[1][2]</sup>.

### REFERENCES

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[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.

[2]. Edward Scolnick, et al. Uses of paralog-selective inhibitors of gsk3 kinases. US20160375006A1.

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

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