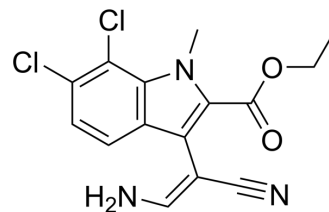


## KH-CB20

<b>Cat. No.:</b>	HY-12828A		
<b>CAS No.:</b>	1354448-60-4		
<b>Molecular Formula:</b>	C <sub>15</sub> H <sub>13</sub> Cl <sub>2</sub> N <sub>3</sub> O <sub>2</sub>		
<b>Molecular Weight:</b>	338.19		
<b>Target:</b>	CDK; DYRK		
<b>Pathway:</b>	Cell Cycle/DNA Damage; Protein Tyrosine Kinase/RTK		
<b>Storage:</b>	Powder	-20°C	3 years
		4°C	2 years
	In solvent	-80°C	6 months
		-20°C	1 month



### SOLVENT & SOLUBILITY

<b>In Vitro</b>	DMSO : 100 mg/mL (295.69 mM; Need ultrasonic and warming)				
		Solvent Concentration	Mass 1 mg	5 mg	10 mg
	<b>Preparing Stock Solutions</b>	1 mM	2.9569 mL	14.7846 mL	29.5692 mL
		5 mM	0.5914 mL	2.9569 mL	5.9138 mL
10 mM		0.2957 mL	1.4785 mL	2.9569 mL	
Please refer to the solubility information to select the appropriate solvent.					
<b>In Vivo</b>	<ol style="list-style-type: none"> <li>Add each solvent one by one: 10% DMSO &gt;&gt; 40% PEG300 &gt;&gt; 5% Tween-80 &gt;&gt; 45% saline Solubility: ≥ 2.5 mg/mL (7.39 mM); Suspended solution</li> <li>Add each solvent one by one: 10% DMSO &gt;&gt; 90% (20% SBE-β-CD in saline) Solubility: ≥ 2.5 mg/mL (7.39 mM); Clear solution</li> <li>Add each solvent one by one: 10% DMSO &gt;&gt; 90% corn oil Solubility: ≥ 2.5 mg/mL (7.39 mM); Clear solution</li> </ol>				

### BIOLOGICAL ACTIVITY

<b>Description</b>	KH-CB20, an E/Z mixture, is a potent and selective inhibitor of CLK1 and the closely related isoform CLK4, with an IC <sub>50</sub> of 16.5 nM for CLK1. KH-CB20 can also inhibit DYRK1A (IC <sub>50</sub> =57.8 nM) and CLK3 (IC <sub>50</sub> =488 nM) <sup>[1]</sup> .		
<b>IC<sub>50</sub> &amp; Target</b>	CLK1 16.5 nM (IC <sub>50</sub> )	DYRK1A 57.8 nM (IC <sub>50</sub> )	CLK3 488 nM (IC <sub>50</sub> )
<b>In Vitro</b>	KH-CB20 shows selectivity for CLK1 (IC <sub>50</sub> =16.5 nM) over DYRK1A (IC <sub>50</sub> =57.8 nM) and CLK3 (IC <sub>50</sub> =488 nM) <sup>[1]</sup> .		

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

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## REFERENCES

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[1]. Fedorov O, et, al. Specific CLK inhibitors from a novel chemotype for regulation of alternative splicing. Chem Biol. 2011 Jan 28;18(1):67-76.

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

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