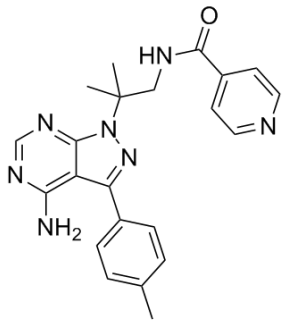
WEHI-345

Cat. No.:	HY-18937
CAS No.:	1354825-58-3
Molecular Formula:	$C_{22}H_{23}N_7O$
Molecular Weight:	401.46
Target:	RIP kinase
Pathway:	Apoptosis
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 : 25 mg/mL (62.27 mM; Need ultrasonic)

Preparing Stock Solutions	Solvent / Mass / Concentration	1 mg	5 mg	10 mg
	1 mM	2.4909 mL	12.4545 mL	24.9091 mL
	5 mM	0.4982 mL	2.4909 mL	4.9818 mL
	10 mM	0.2491 mL	1.2455 mL	2.4909 mL

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

In Vivo

1. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
   Solubility: ≥ 2.5 mg/mL (6.23 mM); Clear solution
2. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 2.5 mg/mL (6.23 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

WEHI-345 is a potent and selective RIPK2 kinase inhibitor with an IC_{50} of 0.13 μM, which delays RIPK2 ubiquitylation and NF-κB activation on oligomerization domain (NOD) stimulation[1].

IC_{50} & Target

IC_{50}: 0.13 μM (RIPK2 kinase)[1]

In Vitro

WEHI-345 (500 nM; Raw 267.4 cells) is able to inhibit MDP-induced autophosphorylation activity of RIPK2 in cells[1].
WEHI-345 (500 nM; 0 hour, 2 hours, 4 hours, 8 hours; BMDMs or THP-1 cells) potently blocks MDP-induced transcription of the inflammatory mediators TNF and interleukin-6 (IL-6) in bone marrow-derived macrophages (BMDMs). In THP-1 cells, WEHI-345 reduces mRNA levels of NF-kB targets such as TNF, IL-8, IL-1b and A20[1].

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

Western Blot Analysis[1]

Cell Line:	Raw 267.4 cells
Concentration:	500 nM
Incubation Time:	
Result:	Inhibited MDP-induced autophosphorylation activity of RIPK2 in cells.

RT-PCR[1]

Cell Line:	BMDMs or THP-1 cells
Concentration:	500 nM
Incubation Time:	0 hour, 2 hours, 4 hours, 8 hours
Result:	Blocked MDP-induced transcription of the inflammatory mediators TNF and interleukin-6 (IL-6) in BMDMs. And reduced mRNA levels of NF-kB targets in THP-1 cells.

In Vivo

WEHI-345 (20 mg/kg; intraperitoneal injection; twice daily; for 6 days; C57BL/6 male mice) treatment reduces disease score, inflammatory infiltrate, histological score and recruitment of dendritic cells to the site of inflammation. And improves body weight and reduces cytokine and chemokine levels, indicating an overall improvement of the condition in experimental autoimmune encephalomyelitis (EAE)-induced wild-type C57Bl/6 mice[1].

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

Animal Model:	C57BL/6 male mice (8-week-old)[1]
Dosage:	20 mg/kg
Administration:	Intraperitoneal injection; twice daily; for 6 days
Result:	Reduced disease score, inflammatory infiltrate, histological score and recruitment of dendritic cells to the site of inflammation. And improved body weight and reduced cytokine and chemokine levels.

CUSTOMER VALIDATION

- Mol Cell. 2018 Feb 15;69(4):551-565.e7.
- J Immunol. 2017 May 1;198(9):3729-3736.

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REFERENCES

[1]. Nachbur U, et al. A RIPK2 inhibitor delays NOD signalling events yet prevents inflammatory cytokine production. Nat Commun. 2015 Mar 17;6:6442.

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

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