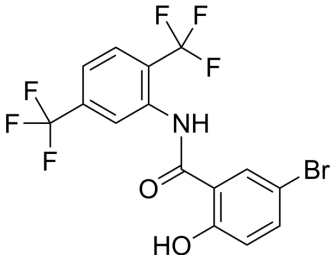
IMD-0560

Cat. No.:	HY-105661
CAS No.:	439144-66-8
Molecular Formula:	$C_{15}H_8BrF_6NO_2$
Molecular Weight:	428.12
Target:	IKK
Pathway:	NF-κB
Storage:	Powder -20°C 3 years 4°C 2 years In solvent -80°C 2 years -20°C 1 year



SOLVENT & SOLUBILITY

In Vitro

Ethanol : 50 mg/mL (116.79 mM; Need ultrasonic)

Preparing Stock Solutions

Solvent / Mass / Concentration	1 mg	5 mg	10 mg
1 mM	2.3358 mL	11.6790 mL	23.3579 mL
5 mM	0.4672 mL	2.3358 mL	4.6716 mL
10 mM	0.2336 mL	1.1679 mL	2.3358 mL

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

In Vivo

1. Add each solvent one by one: 10% EtOH >> 40% PEG300 >> 5% Tween-80 >> 45% saline
   Solubility: ≥ 2.5 mg/mL (5.84 mM); Clear solution
2. Add each solvent one by one: 10% EtOH >> 90% corn oil
   Solubility: ≥ 2.5 mg/mL (5.84 mM); Clear solution

BIOLOGICAL ACTIVITY

Description	IMD-0560 is a novel IκB kinase β inhibitor.
IC_{50} & Target	IKKβ
In Vitro	Pretreatment with IMD-0560 inhibits both IκBα degradation and p65 phosphorylation induced by TNFα. IMD-0560 also suppresses TNFα-induced transcriptional activity. Pretreatment with IMD-0560 strongly inhibits TNFα-induced cell invasion. Pretreatment with IMD-0560 suppresses MMP-9 activity by inhibiting MMP-9 expression[1]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.
In Vivo	The tumor size is reduced in the IMD-0560-treated groups in a dose-dependent manner, and no tumor is detected in some

	mice treated with 5 mg/kg IMD-0560. Zygoma destruction is significantly suppressed in the IMD-0560-treated groups compare to the control groups. Although the tumor size in the 5 mg/kg IMD-0560-treated group is smaller than that of the 3 mg/kg IMD-0560-treated group, the inhibitory effect of each treatment on zygoma destruction is similar[1]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

PROTOCOL

Cell Assay [1]	Cell migration is assessed in a modified chamber containing a gelatin-coated porous membrane. IMD-0560 is placed in the upper chamber 2 hrs prior to TNFα treatment, and TNFα is placed in the lower chamber at 10 ng/mL; then, the chamber is incubated for 24 hrs. Next, the cells attached to the upper surface of the membrane are scraped off, and the cells that migrate to the lower surface are fixed and stained with DAPI[1]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.
Animal Administration [1]	Sixty male mice, weighing approximately 20 g at 8 to 10 weeks of age are used. They are anesthetized using ether, and 0.1 mL of SCCVII in DMEM is injected into the left masseter region. The mice are randomly separated into six groups with similar average body weights. One week (early treatment: E) or 2 weeks (late treatment: L) after injection, the mice are injected between the left masseter region and the surface of the left mandibular bone with vehicle (50 μL of carboxymethyl-cellulose: CMC/mouse, n=10) or IMD-0560 (3 or 5 mg/kg/50 μL of CMC/mouse, n=10), 3 times per week for a total of 3 weeks (E) or 2 weeks (L). The tumor sizes are assessed using calipers, and the tumor volume is calculated. At the end of week 3, all surviving mice are euthanized, and the heads of the mice are fixed in 3.7% formaldehyde[1]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

REFERENCES

[1]. Tada Y, et al. The novel IκB kinase β inhibitor IMD-0560 prevents bone invasion by oral squamous cell carcinoma. Oncotarget. 2014 Dec 15;5(23):12317-30.

Tel: 609-228-6898 Fax: 609-228-5909 E-mail: tech@MedChemExpress.com
Address: 1 Deer Park Dr, Suite Q, Monmouth Junction, NJ 08852, USA