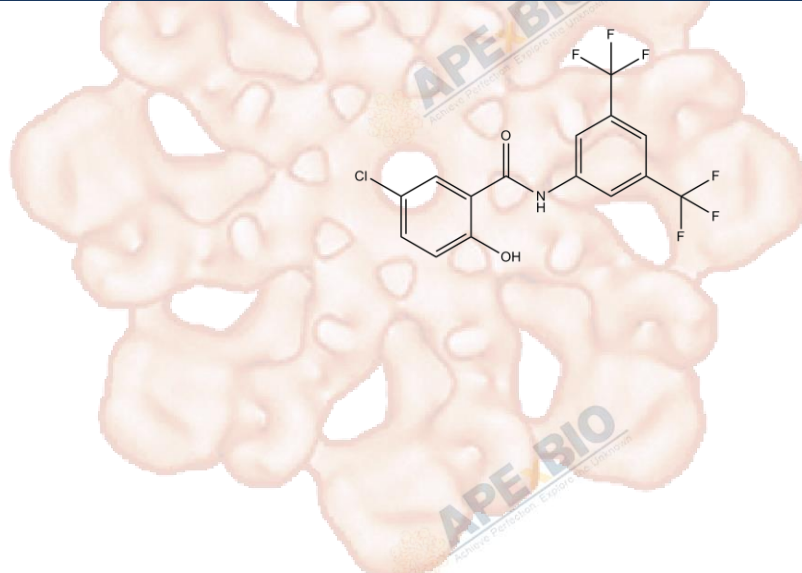


# Product Data Sheet

## IMD 0354

<b>Cat. No.:</b>	B1587
<b>CAS No.:</b>	978-62-1
<b>Formula:</b>	C <sub>15</sub> H <sub>8</sub> ClF <sub>6</sub> NO <sub>2</sub>
<b>M.Wt:</b>	383.67
<b>Synonyms:</b>	
<b>Target:</b>	Immunology/Inflammation
<b>Pathway:</b>	IκB/IKK
<b>Storage:</b>	Store at -20°C



### Solvent & Solubility

insoluble in H<sub>2</sub>O; ≥100.8 mg/mL in DMSO; ≥2.97 mg/mL in EtOH

In Vitro

Preparing Stock Solutions	Solvent	Mass		
		1mg	5mg	10mg
	<b>Concentration</b>			
	<b>1 mM</b>	2.6064 mL	13.0320 mL	26.0641 mL
	<b>5 mM</b>	0.5213 mL	2.6064 mL	5.2128 mL
	<b>10 mM</b>	0.2606 mL	1.3032 mL	2.6064 mL

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

### Biological Activity

Shortsummary

IKKβ inhibitor

IC<sub>50</sub> & Target

In Vitro

#### Cell Viability Assay

Cell Line:	HMC-1 cells
Preparation method:	The solubility of this compound in DMSO is >100.8mg/mL. General tips for obtaining a higher concentration: Please warm the tube at 37°C for 10 minutes and/or shake it in the ultrasonic bath for a while. Stock solution can be stored below -20°C for several months.
Reacting conditions:	0-10 μM; 24, 48 and 72 h

	Applications:	In HMC-1 cells transfected with pNF- $\kappa$ B-TA-Luc plasmid, IMD 0354 dose-dependently reduced luciferase activity, which represented transcriptional activation of NF- $\kappa$ B. Treatment with IMD 0354 for 24h completely suppressed the translocation of NF- $\kappa$ B to the nucleus. IMD-0354 significantly inhibited cell proliferation in a time- and dose-dependent way. IMD-0354 almost inhibited the proliferation of IC-2G559 cells and IC-2V814 cells at 0.5 $\mu$ M. In HMC-1 cells, IMD-0354 arrested the cell cycle at the G0/G1 phase.
In Vivo	<b>Animal experiment</b>	
	Animal models:	a mouse model of allergic inflammation
	Dosage form:	5 or 20 mg/kg; administered intraperitoneally from day 8 to day 18
	Applications:	In OVA/-OVA mice and OVA/CMC/OVA mice, IMD-0354 (20 mg/kg) significantly decreased the amount of activated NF- $\kappa$ B in the lungs. IMD-0354 at 5 mg/kg also significantly decreased NF- $\kappa$ B, but the magnitude of the decrease was lower than with 20 mg/kg IMD-0354. IMD-0354 at 20 mg/kg significantly reduced airway resistance, suggesting that administration of IMD-0354 improved the airway hyperresponsiveness (AHR). IMD-0354 at 20 mg/kg also significantly reduced eosinophil infiltration.
	Other notes:	Please test the solubility of all compounds indoor, and the actual solubility may slightly differ with the theoretical value. This is caused by an experimental system error and it is normal.

## Product Citations

1. Yang T, Wang Y, et al. "Hepatocyte growth factor-induced differentiation of bone mesenchymal stem cells toward hepatocyte-like cells occurs through nuclear factor-kappa B signaling in vitro." Cell Biol Int. 2016 Jun 1. PMID:27249785

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## References

[1] Tanaka A, Konno M, Muto S, Kambe N, Morii E, Nakahata T, Itai A and Matsuda H. A novel NF- $\kappa$ B inhibitor, IMD-0354, suppresses neoplastic proliferation of human mast cells with constitutively activated c-kit receptors. Blood. 2005 Mar; 105(6): 2324-31.

[2] Sugita A, Ogawa H, Azuma M, Muto S, Honjo A, Yanagawa H, Nishioka Y, Tani K, Itai A and Sone S. Antiallergic and anti-inflammatory effects of a novel I kappaB kinase beta inhibitor, IMD-0354, in a mouse model of allergic inflammation. Int Arch Allergy Immunol. 2009; 148(3): 186-98.

## Caution

**FOR RESEARCH PURPOSES ONLY.**

**NOT FOR HUMAN, VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.**

*Specific storage and handling information for each product is indicated on the product datasheet. Most APExBIO products are stable under the recommended conditions. Products are sometimes shipped at a temperature that differs from the recommended storage temperature. Shortterm storage of many products are stable in the short-term at temperatures that differ from that required for long-term storage. We ensure that the product is shipped under conditions that will maintain the quality of the reagents. Upon receipt of the product, follow the storage recommendations on the product data sheet.*

**APExBIO Technology**

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