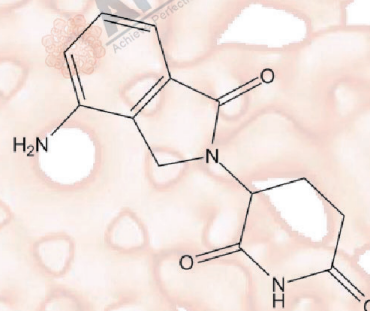


# Product Data Sheet

## Lenalidomide (CC-5013)

<b>Cat. No.:</b>	A4211
<b>CAS No.:</b>	191732-72-6
<b>Formula:</b>	C <sub>13</sub> H <sub>13</sub> N <sub>3</sub> O <sub>3</sub>
<b>M.Wt:</b>	259.3
<b>Synonyms:</b>	Revlimid, IMiD3, CC 5013, CDC-501, CDC 501
<b>Target:</b>	Apoptosis
<b>Pathway:</b>	TNF- $\alpha$
<b>Storage:</b>	Store at -20°C



## Solvent & Solubility

insoluble in EtOH; insoluble in H<sub>2</sub>O;  $\geq 100.8$  mg/mL in DMSO

In Vitro	Preparing Stock Solutions	Mass			
		Solvent Concentration	1mg	5mg	10mg
		<b>1 mM</b>	3.8565 mL	19.2827 mL	38.5654 mL
		<b>5 mM</b>	0.7713 mL	3.8565 mL	7.7131 mL
		<b>10 mM</b>	0.3857 mL	1.9283 mL	3.8565 mL

Please refer to the solubility information to select the appropriate solvent

## Biological Activity

Shortsummary	Antineoplastic agent, inhibits angiogenesis	
IC <sub>50</sub> & Target	13 nM (TNF- $\alpha$ )	
In Vitro	<b>Cell Viability Assay</b>	
	Cell Line:	Peripheral blood mononuclear cells (PBMCs)
	Preparation method:	The solubility of this compound in DMSO is >10 mM. 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:	10 $\mu$ M, 7 days

	Applications:	The cells were incubated with the dye at 37°C for 10 min and treated for 7 days in RPMI culture medium with lenalidomide. Cells were surface stained with anti-CD4-PerCP and anti-CD25-APC, followed by intracellular staining with anti-FOXP3-PE. Lenalidomide inhibited the expression of CD4+CD25high CTLA-4+FOXP3+ cells. Incubation with lenalidomide significantly decreases expression of the T regulatory cell population after 7 days of culture. The drug decreased the percentage of CD4+CD25high cells expressing both CTLA-4 and FOXP3 from 25 to 12%.
In Vivo	<b>Animal experiment</b>	
	Animal models:	Male Sprague–Dawley rats
	Dosage form:	Oral administration, 50 mg/kg or 250 mg/kg
	Applications:	In the rat mesenteric window assay (RMWA), representative differences between vehicle and 50 or 250 mg/kg lenalidomide-treated rats were visualized by staining with an antibody against rat endothelium in bFGF-induced angiogenic windows. The induction of angiogenesis by bFGF was significantly inhibited by oral treatment of lenalidomide in a dose-dependent manner. Lenalidomide significantly decreased the percentage of vascularized area from 5.16% in the control group to 2.58 and 1.69 in the 50 and 250 mg/kg group, respectively.
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

See more customer validations on [www.apexbt.com](http://www.apexbt.com).

## References

- [1] Galustian C, Meyer B, Labarthe M C, et al. The anti-cancer agents lenalidomide and pomalidomide inhibit the proliferation and function of T regulatory cells. *Cancer Immunology, Immunotherapy*, 2009, 58(7): 1033-1045.
- [2] Dredge K, Horsfall R, Robinson S P, et al. Orally administered lenalidomide (CC-5013) is anti-angiogenic in vivo and inhibits endothelial cell migration and Akt phosphorylation in vitro. *Microvascular research*, 2005, 69(1): 56-63.

## 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**

**[www.apexbt.com](http://www.apexbt.com)**

7505 Fannin street, Suite 410, Houston, TX 77054.

Tel: +1-832-696-8203 | Fax: +1-832-641-3177 | Email: [info@apexbt.com](mailto:info@apexbt.com)

