

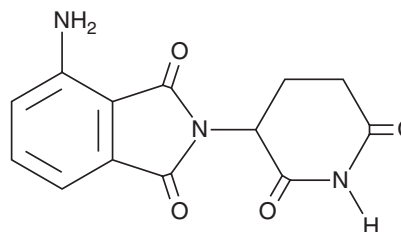
# PRODUCT INFORMATION



## Pomalidomide

Item No. 19877

**CAS Registry No.:** 19171-19-8  
**Formal Name:** 4-amino-2-(2,6-dioxo-3-piperidinyl)-1H-isoindole-1,3(2H)-dione  
**Synonyms:** CC-4047, 3-amino Thalidomide  
**MF:** C<sub>13</sub>H<sub>11</sub>N<sub>3</sub>O<sub>4</sub>  
**FW:** 273.2  
**Purity:** ≥98%  
**UV/Vis.:** λ<sub>max</sub>: 226, 238, 323, 390 nm  
**Supplied as:** A crystalline solid  
**Storage:** -20°C  
**Stability:** ≥4 years



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

### Laboratory Procedures

Pomalidomide is supplied as a crystalline solid. A stock solution may be made by dissolving the pomalidomide in the solvent of choice, which should be purged with an inert gas. Pomalidomide is soluble in organic solvents such as DMSO and dimethyl formamide. The solubility of pomalidomide in these solvents is approximately 15 and 10 mg/ml, respectively.

Pomalidomide is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, pomalidomide should first be dissolved in DMSO and then diluted with the aqueous buffer of choice. Pomalidomide has a solubility of approximately 0.14 mg/ml in a 1:6 solution of DMSO:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

### Description

Pomalidomide is an analog of thalidomide (Item No. 14610) that inhibits the E3 ligase protein cereblon (CRBN) with an IC<sub>50</sub> value of approximately 3 μM for the human recombinant CRBN-DNA damage binding protein-1 (CRBN-DDB1) complex.<sup>1</sup> It inhibits autoubiquitination of CRBN in HEK293T cells expressing CRBN but not those expressing a thalidomide-binding defective CRBN mutation. It inhibits proliferation of U266 myeloma cells when used at concentrations ranging from 0.1 to 10 μM. Pomalidomide also has antiangiogenic and immunomodulatory effects against myeloma cells, modulating cell adhesion, decreasing production of key pro-survival cytokines, including TNF-α, and triggering the activation of caspase-8.<sup>2,3</sup> Pomalidomide (3 mg/kg per day), in combination with dexamethasone, reduces tumor growth in a H929 R10-1 lenalidomide-resistant mouse xenograft model.<sup>4</sup> Formulations containing pomalidomide have been used in the treatment of multiple myeloma.

### References

1. Lopez-Girona, A., Mendy, D., Miller, K., *et al.* Cereblon is a direct protein target for immunomodulatory and antiproliferative activities of lenalidomide and pomalidomide. *Leukemia* **26(11)**, 2326-2335 (2012).
2. Zhu, Y. X., Kortuem, K. M., and Stewart, A. K. Molecular mechanism of action of immune-modulatory drugs thalidomide, lenalidomide and pomalidomide in multiple myeloma. *Leuk. Lymphoma* **54(4)**, 683-687 (2013).
3. Latif, T., Chauhan, N., Khan, R., *et al.* Thalidomide and its analogues in the treatment of multiple myeloma. *Exp. Dermatol. Oncol.* **1(1)**, 27 (2012).
4. Rychak, E., Mendy, D., Shi, T., *et al.* Pomalidomide in combination with dexamethasone results in synergistic anti-tumour responses in pre-clinical models of lenalidomide-resistant multiple myeloma. *Br. J. Haematol.* **172(6)**, 889-901 (2016).

#### WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

#### SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

#### WARRANTY AND LIMITATION OF REMEDY

Buyer agrees to purchase the material subject to Cayman's Terms and Conditions. Complete Terms and Conditions including Warranty and Limitation of Liability information can be found on our website.

Copyright Cayman Chemical Company, 10/10/2022

#### CAYMAN CHEMICAL

1180 EAST ELLSWORTH RD  
ANN ARBOR, MI 48108 · USA

**PHONE:** [800] 364-9897  
[734] 971-3335

**FAX:** [734] 971-3640

CUSTSERV@CAYMANCHEM.COM  
WWW.CAYMANCHEM.COM