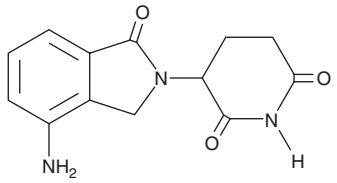
PRODUCT INFORMATION

Lenalidomide

Item No. 14643

CAS Registry No.:	191732-72-6
Formal Name:	3-(4-amino-1,3-dihydro-1-oxo-2H-isoindol-2-yl)-2,6-piperidinedione
Synonym:	CC-5013
MF:	$C_{13}H_{13}N_3O_3$
FW:	259.3
Purity:	≥98%
UV/Vis.:	λ_{max}: 206, 220, 311 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

Lenalidomide is supplied as a crystalline solid. A stock solution may be made by dissolving the lenalidomide in the solvent of choice, which should be purged with an inert gas. Lenalidomide is soluble in organic solvents such as DMSO and dimethyl formamide (DMF). The solubility of lenalidomide in these solvents is approximately 16 mg/ml.

Lenalidomide is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, lenalidomide should first be dissolved in DMF and then diluted with the aqueous buffer of choice. Lenalidomide has a solubility of approximately 0.5 mg/ml in a 1:1 solution of DMF:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

Lenalidomide is a derivative of the immunomodulatory compound thalidomide (Item No. 14610).[1] It reduces TNF-α production in isolated human peripheral blood mononuclear cells (PBMCs) and whole blood stimulated by LPS from *S. minnesota* (Item No. 23608; IC_{50}s = 13 and 25 nM, respectively). Lenalidomide has been used as a building block in the synthesis of PROTACs that induce the degradation of Ikaros family zinc finger protein 1 (IKZF1) and IKZF3 in MM.1S multiple myeloma cells.[2] Orally administered lenalidomide (250 mg/kg per day) reduces vascularization and total microvascular length in a rat mesenteric window assay.[3] Formulations containing lenalidomide have been used in the treatment of myelodysplastic syndrome and multiple myeloma.

References

1. Muller, G.W., Chen, R., Huang, S.Y., *et al.* Amino-substituted thalidomide analogs: Potent inhibitors of TNF-α production. Bioorg. *Med. Chem. Lett.* **9(11)**, 1625-1630 (1999).
2. Krönke, J., Udeshi, N.D., Narla, A., *et al.* Lenalidomide causes selective degradation of IKZF1 and IKZF3 in multiple myeloma cells. *Science* **343(6168)**, 301-305 (2014).
3. 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. *Microvasc. Res.* **69(1-2)**, 56-63 (2005).

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