

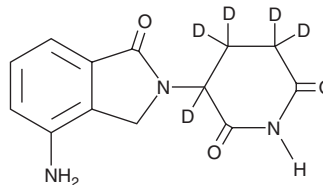
# PRODUCT INFORMATION



## Lenalidomide-d<sub>5</sub>

Item No. 22370

**CAS Registry No.:** 1227162-34-6  
**Formal Name:** 5-(4-amino-1,3-dihydro-1-oxo-2H-isoindol-2-yl)-2,6-piperidinedione-3,3,4,4,5-d<sub>5</sub>  
**MF:** C<sub>13</sub>H<sub>8</sub>D<sub>5</sub>N<sub>3</sub>O<sub>3</sub>  
**FW:** 264.3  
**Chemical Purity:** ≥98% (Lenalidomide)  
**Deuterium Incorporation:** ≥99% deuterated forms (d<sub>1</sub>-d<sub>5</sub>); ≤1% d<sub>0</sub>  
**Supplied as:** A 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-d<sub>5</sub> is intended for use as an internal standard for the quantification of lenalidomide (Item No. 14643) by GC- or LC-MS. The accuracy of the sample weight in this vial is between 5% over and 2% under the amount shown on the vial. If better precision is required, the deuterated standard should be quantitated against a more precisely weighed unlabeled standard by constructing a standard curve of peak intensity ratios (deuterated versus unlabeled).

Lenalidomide-d<sub>5</sub> is supplied as a solid. A stock solution may be made by dissolving the lenalidomide-d<sub>5</sub> in the solvent of choice, which should be purged with an inert gas. Lenalidomide-d<sub>5</sub> is soluble in methanol and DMSO.

### Description

Lenalidomide is a derivative of the immunomodulatory compound thalidomide (Item No. 14610).<sup>1</sup> 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<sub>50</sub>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.<sup>2</sup> Orally administered lenalidomide (250 mg/kg per day) reduces vascularization and total microvascular length in a rat mesenteric window assay.<sup>3</sup> 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).

#### 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.

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