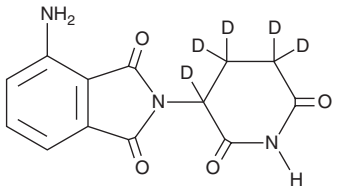
PRODUCT INFORMATION

Pomalidomide-d_5

Item No. 25358

CAS Registry No.:	1377838-49-7
Formal Name:	4-amino-2-(2,6-dioxo-3-piperidinyl-3,4,4,5,5-d_5)-1H-isoindole-1,3(2H)-dione
MF:	$C_{13}H_6D_5N_3O_4$
FW:	278.3
Chemical Purity:	≥98% (Pomalidomide)
Deuterium Incorporation:	≥99% deuterated forms (d_1-d_5); ≤1% d_0
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

Pomalidomide-d_5 is intended for use as an internal standard for the quantification of pomalidomide (Item No. 19877) 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).

Pomalidomide-d_5 is supplied as a solid. A stock solution may be made by dissolving the pomalidomide-d_5 in the solvent of choice. Pomalidomide-d_5 is soluble in organic solvents such as DMSO and dimethyl formamide, which should be purged with an inert gas. The solubility of pomalidomide-d_5 in these solvents is approximately 15 and 10 mg/ml, respectively.

Description

Pomalidomide is an analog of thalidomide (Item No. 14610) that inhibits the E3 ligase protein cereblon (CRBN) with an IC_{50} value of approximately 3 µM for the human recombinant CRBN-DNA damage binding protein-1 (CRBN-DDB1) complex.[1] 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.[2,3] Pomalidomide (3 mg/kg per day), in combination with dexamethasone, reduces tumor growth in an H929 R10-1 lenalidomide-resistant mouse xenograft model.[4] Formulations containing pomalidomide have been used in the treatment of multiple myeloma.

References

1. Lopez-Girona, A., Mendy, D., Miller, K., *et al. Leukemia* **26(11)**, 2326-2335 (2012).
2. Zhu, Y.X., Kortuem, K.M., and Stewart, A.K. *Leukemia and Lymphoma* **54(4)**, 683-687 (2013).
3. Latif, T., Chauhan, N., Khan, R., *et al. Exp. Hermatol. Oncol.* **1(1)**, 27 (2012).
4. Rychak, E., Mendy, D., Shi, T., *et al. Br. J. Haematol.* **172(6)**, 889-901 (2016).

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