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# Produktinformation

- Forschungsprodukte & Biochemikalien
- Zellkultur & Verbrauchsmaterial
- Diagnostik & molekulare Diagnostik
- Laborgeräte & Service

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See the following pages for more information!

## Lieferung & Zahlungsart

siehe unsere Liefer- und Versandbedingungen

## Zuschläge

- Mindermengenzuschlag
- Trockeneiszuschlag
- Gefahrgutzuschlag
- Expressversand


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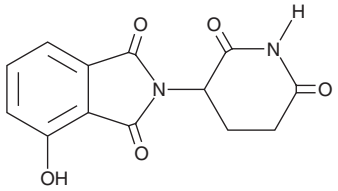
# PRODUCT INFORMATION

## E3 Ligase Ligand 2

*Item No. 36664*

| | |
|---|---|
| **CAS Registry No.:** | 5054-59-1 |
| **Formal Name:** | 2-(2,6-dioxo-3-piperidinyl)-4-hydroxy-1H-isoindole-1,3(2H)-dione |
| **Synonym:** | 4-hydroxy Thalidomide |
| **MF:** | $C_{13}H_{10}N_2O_5$ |
| **FW:** | 274.2 |
| **Purity:** | ≥95% |
| **UV/Vis.:** | $\lambda_{max}$: 220 nm |
| **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

E3 ligase ligand 2 is supplied as a solid. A stock solution may be made by dissolving the E3 ligase ligand 2 in the solvent of choice, which should be purged with an inert gas. E3 ligase ligand 2 is soluble in organic solvents such as DMSO and dimethyl formamide. The solubility of E3 ligase ligand 2 in these solvents is approximately 10 and 12 mg/ml, respectively.

### Description

E3 ligase ligand 2 is an active metabolite of thalidomide (Item No. 14610) and an intermediate in the synthesis of proteolysis-targeting chimeras (PROTACs) containing thalidomide, a ligand for the E3 ubiquitin ligase cereblon (CRBN), used in targeted protein degradation.[1,2] E3 ligase ligand 2 is formed from thalidomide *via* hydroxylation. It decreases the production of TNF-α induced by 12-O-tetradecanoylphorbol 13-acetate (TPA; Item No. 10008014) in THP-1 cells when used at a concentration of 30 µM.[3] E3 ligase ligand 2 (333 µM) completely inhibits the proliferation of human umbilical vein endothelial cells (HUVECs). It inhibits VEGF- and FGF2-induced angiogenesis by 14% in a chicken chorioallantoic membrane (CAM) assay *in utero* when administered at a dose of 100 µg/embryo.[1]

### References


1. Marks, M.G., Shi, J., Fry, M.O., *et al.* Effects of putative hydroxylated thalidomide metabolites on blood vessel density in the chorioallantoic membrane (CAM) assay and on tumor and endothelial cell proliferation. *Biol. Pharm. Bull.* **25(5)**, 597-604 (2002).
2. Robb, C.M., Contreras, J.I., Kour, S., *et al.* Chemically induced degradation of CDK9 by a proteolysis targeting chimera (PROTAC). *Chem. Commun. (Camb.)* **53(54)**, 7577-7580 (2017).
3. Nakamura, T., Noguchi, T., Kobayashi, H., *et al.* Mono- and dihydroxylated metabolites of thalidomide: Synthesis and TNF-α production-inhibitory activity. *Chem. Pharm. Bull. (Tokyo)* **54(12)**, 1709-1714 (2006).





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