Product Data Sheet

Product Name: Thalidomide-O-amido-C4-NH2
Cat. No.: GC33129

Chemical Properties

Cas. No.	1799711-24-2		
SMILES	NCCCCNC(COC1=C(C(N2C(CCC3=O)C(N3)=O)=O)C(C2=O)=CC=C1)=O		
Formula	$C_{19}H_{22}N_4O_6$	M.Wt	402.4
Solubility	Soluble in DMSO	Storage	Store at -20°C
General tips	For obtaining a higher solubility , please warm the tube at 37 °C and shake it in the ultrasonic bath for a while.Stock solution can be stored below -20°C for several months.		
Shipping Condition	Evaluation sample solution : ship with blue ice All other available size: ship with RT , or blue ice upon request.		

Caution: Product has not been fully validated for medical applications. For research use only.
Tel: (909) 407-4943 Fax: (626) 353-8530 E-mail: tech@glpbio.com
Address: 10292 Central Ave. #205, Montclair, CA, USA

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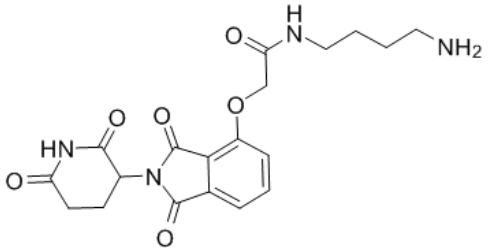
Structure



Background

Thalidomide-O-amido-C4-NH2 is an E3 ubiquitin ligase ligand-linker conjugate (CRBN ligand-linker conjugate) that can be covalently linked to a target protein (POI) ligand to assemble a heterobifunctional PROTAC (Proteolysis Targeting Chimera) molecule, triggering ubiquitination of the target protein and directing protein to proteasomal degradation. Thalidomide-O-amido-C4-NH2 can serve as a key synthetic building block for PROTAC molecular design, targeted protein degradation (TPD) platform development, as well as basic research and drug discovery in oncology, immunology, and diseases related to protein homeostasis[1-4].

References:

[1] Zhou B, Hu J, Xu F, et al. Discovery of a Small-Molecule Degrader of Bromodomain and Extra-Terminal (BET) Proteins with Picomolar Cellular Potencies and Capable of Achieving Tumor Regression. J Med Chem. 2018 Jan 25;61(2):462-481.

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[2] Kim JH, Scialli AR. Thalidomide: the tragedy of birth defects and the effective treatment of disease. Toxicol Sci. 2011 Jul;122(1):1-6.
[3] Ito T. Protein degraders - from thalidomide to new PROTACs. J Biochem. 2024 Apr 29;175(5):507-519.
[4] Steinebach C , Kehm H , Lindner S, et al. PROTAC-mediated crosstalk between E3 ligases. Chem Commun (Camb). 2019 Feb 5;55(12):1821-1824.

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