

dBRD9

Chemical Properties

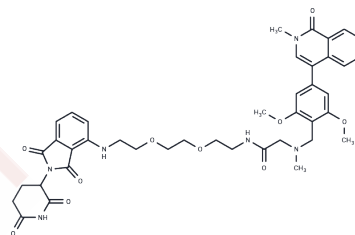
CAS No. : 2170679-45-3

Formula: C40H45N7O10

Molecular Weight: 783.83

Storage: Powder: -20°C for 3 years | In solvent: -80°C for 1 year

Actual storage temperature shall be subject to the COA.



Biological Description

Description	dBRD9 is a PROTAC. dBRD9 is a double-acting molecule, partially containing Bromodomain-containing protein 9 (BRD9), ligand that recruits the cereblon E3 ubiquitin ligase. Ligand that recruits the cereblon E3 ubiquitin ligase. dBRD9 can inhibit the degradation of BRD9 in MOLM-13 cells, and the IC50 is 104 nM.
Targets(IC50)	Epigenetic Reader Domain,PROTACs
In vitro	dBRD9 has prompt rapid BRD9 degradation over a broad range of concentrations. The degraded BRD9 showed significantly enhanced efficacy(10-to-100-fold). These findings reveal the tractability of non-BET bromodomain-containing proteins to chemical degradation and highlight lead compound dBRD9 as a tool for the study of BRD9[1].
In vivo	The final concentration of dBRD9 of 0.3 nM was mixed in silk fibroin hydrogel and injected into mice. It was found that BRD9 degradant alleviated ZOL-related ONJ. The ONJ-dBRD9 group is filled with well-organized newly formed trabecular bone, with 80% reduced incidence rate of osteonecrosis and periosteal reaction compared with the ONJ-control group[1].

Solubility Information

Solubility	DMSO: 90 mg/mL (114.82 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
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Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	1.2758 mL	6.3789 mL	12.7579 mL
5 mM	0.2552 mL	1.2758 mL	2.5516 mL
10 mM	0.1276 mL	0.6379 mL	1.2758 mL
50 mM	0.0255 mL	0.1276 mL	0.2552 mL

Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. Please use it as soon as possible.

Note: The dilution table applies only to solid products. For liquid products, please calculate the stock solution based on the stated concentration and/or density.

Reference

Remillard D, et al. Degradation of the BAF Complex Factor BRD9 by Heterobifunctional Ligands. *Angew Chem Int Ed Engl.* 2017;56(21):5738-5743.

Du J, et al. BRD9-mediated chromatin remodeling suppresses osteoclastogenesis through negative feedback mechanism. *Nature Communications*, 2023;14(1): 1413.

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Tel:781-999-4286 E_mail:info@targetmol.com Address:34 Washington Street,Wellesley Hills,MA 02481