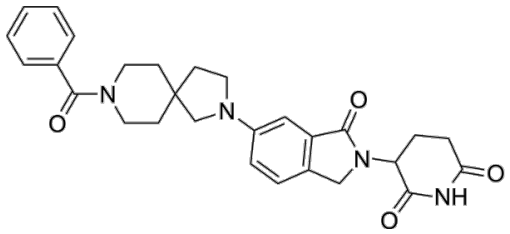
Product Data Sheet

Product Name: MRT-31619
Cat. No.: GC81028

Chemical Properties

Cas. No.			
Formula	$C_{28}H_{30}N_4O_4$	M.Wt	486.56
Solubility	DMSO: 1.25 mg/mL (2.57 mM; ultrasonic and warming and heat to 60°C)	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.		
Structure			



Background

MRT-31619 is a selective CRBN Molecular glue degrader, with an IC_{50} of 14 nM and an EC 50 of 72 nM. MRT-31619 triggers ubiquitination and proteasomal degradation of CRBN. MRT-31619 serves as a chemical knockout tool for CRBN depletion to evaluate the dependence of other molecular glues on CRBN. MRT-31619 is applicable to the research of CRBN -related disease models [1] [2].

In Vitro, MRT-31619 (1-10 μM; 1-24 h) potently and selectively degrades CRBN in Jurkat cells: this

effect occurs after treatment at 1 μM for 1 h, 3 h and 24 h, as well as after treatment at 10 μM for 24 h, without affecting the level of DDB1[1]. Incubation of purified recombinant CRBN-DDB1 complex with MRT-31619 (10 μM; 60 min) induces the formation of CRBN-DDB1 dimeric complex[1]. MRT-31619 induces the formation of CRBN ternary complex, with an EC50 of 72 nM as determined by FIDA assay using purified recombinant CRBN-DDB1 complex[1]. MRT-31619 efficiently and selectively degrades CRBN via a self-targeting mechanism involving CRBN homodimerization, with a CRBN-binding IC_{50} of 14 nM and a complex-formation EC50 of 72 nM in Jurkat cells [2].

References:

[1]. Langousis G, et al. A degron-mimicking molecular glue drives CRBN homo-dimerization and degradation. Nature communications. 2025 Nov 19;16(1):10157.
[2]. Won H J, et al. Synthetic and Medicinal Chemistry Perspectives on Cereblon-Binding Molecular Glue Degraders: Recent Advances and Emerging Trends[J]. European Journal of Organic Chemistry, 2026, 29(17): e202501208.

Caution: Product has not been fully validated for medical applications. For research use only.
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