# Data Sheet (Cat.No.T14777)

TargetMol

BRD5529

## Chemical Properties

CAS No. : 1358488-78-4

Formula: C25H31N5O4

Molecular Weight: 465.55

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

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|---|---|
| Description | BRD5529 is a selective inhibitor of the CARD9-E3 ubiquitin ligase TRIM62 protein-protein interaction, with an IC50 value of 8.6 μM. BRD5529 directly and selectively binds CARD9, disrupts TRIM62 recruitment, inhibits TRIM62-mediated ubiquitinylation, and suppresses CARD9 activation. BRD5529 is therefore applicable to investigations involving innate immune signaling, ubiquitination pathways, inflammatory regulation, and CARD9-associated immune responses. |
| Targets(IC50) | E1/E2/E3 Enzyme |
| In vitro | BRD5529 exhibits potent dose-dependent inhibitory activity against the CARD9-TRIM62 interaction, with an IC50 value of 8.6 μM[1].<br>BRD5529 (200 μM, 0–50 min; 200 μM, 2–4 h) suppresses CARD9-dependent signaling in innate immune cells[1]. BRD5529 (40 μM) dose-dependently inhibits TRIM62-mediated CARD9 ubiquitination in vitro[1]. |
| In vivo | BRD5529 (0.1 or 1.0 mg/kg; i.p.; daily, for 2 weeks) does not produce significant changes in daily or final weight gain, shows no major differences in proinflammatory cytokine levels, and does not cause significant alterations in lung, liver, or kidney pathology scores of Pneumocystis pneumonia (PCP) mice model[2]. |

## Solubility Information

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|---|---|
| Solubility | DMSO: 100 mg/mL (214.8 mM),Sonication is recommended.<br>(< 1 mg/ml refers to the product slightly soluble or insoluble) |

Preparing Stock Solutions

| | 1mg | 5mg | 10mg |
|---|---|---|---|
| 1 mM | 2.148 mL | 10.740 mL | 21.480 mL |
| 5 mM | 0.4296 mL | 2.148 mL | 4.296 mL |
| 10 mM | 0.2148 mL | 1.074 mL | 2.148 mL |
| 50 mM | 0.043 mL | 0.2148 mL | 0.4296 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

Leshchiner ES, et al. Small-molecule inhibitors directly target CARD9 and mimic its protective variant in inflammatorybowel disease. Proc Natl Acad Sci U S A. 2017 Oct 24;114(43):11392-11397.
Leshchiner ES, et al. Small-molecule inhibitors directly target CARD9 and mimic its protective variant in inflammatory bowel disease. Proc Natl Acad Sci U S A. 2017 Oct 24;114(43):11392-11397.
Kottom TJ, et al. Preclinical and Toxicology Studies of BRD5529, a Selective Inhibitor of CARD9. Drugs R D. 2022 Jun; 22(2):165-173.