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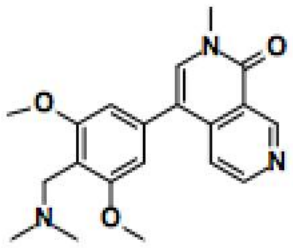
# BRD9 Bromodomain Inhibitor – BI-7273

**Chemical Name:** 4-(4-((dimethylamino)methyl)-3,5-dimethoxyphenyl)-2-methyl-2,7-naphthyridin-1(2H)-one



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|---|---|
| Molecular Weight: | 353.42 |
| Formula: | $C_{20}H_{23}N_3O_3$ |
| Purity: | ≥98% |
| CAS#: | 1883429-21-7 |
| Solubility: | DMSO up to 100 mM<br>Water up to 100 mM |
| Storage | Powder: 4 ºC 1 year<br>DMSO: 4 ºC 3 months<br>-20 ºC 1 year |

**Biological Activity:**

BI-7273 is a potent, selective and cell-permeable BRD9 inhibitor with $IC_{50}$~19 nM (Alpha assay). It also inhibits BRD7 with $IC_{50}$~117 nM (Alpha assay). It has high selectivity against the other bromodomain family members (48 bromodomains) and kinases. In EOL-1 cellular proliferation assay, BI-7273 has $IC_{50}$ at 1400 nM. It has very good pharmacokinetic profiling. BI-7273 together with BI-9546, could be useful chemical tools to further explore BRD9 bromodomain biology in both in vitro and in vivo settings.

**How to Use:**

**In vitro:** BI-7273 was used at 1-10 μM in vitro and cellular assays.

**In vivo:** BI-7273 was orally dosed to mice at 180 mg/kg once per day.

**Reference:**

1. Martin LJ, et al. Structure-Based Design of an in Vivo Active Selective BRD9 Inhibitor. (2016) J Med Chem. 59(10):4462-75.