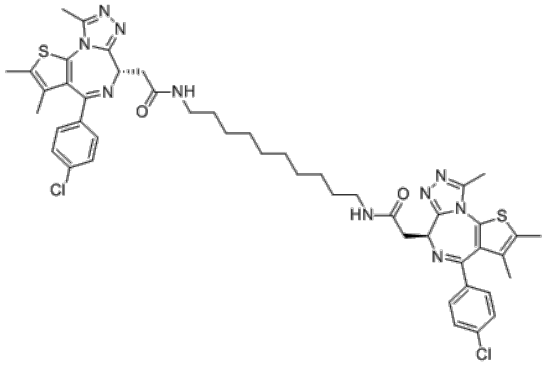
ProbeChem®
*Expedite Your Scientific Research*

WWW.PROBECHEM.COM

# Data Sheet

Global Supplier of Chemical Probes, Inhibitors & Agonists.

| | | |
|---|---|---|
| **Product Name** | : | MS645 |
| **Cat. No.** | : | PC-35423 |
| **CAS No.** | : | 2250091-96-2 |
| **Molecular Formula** | : | $C_{48}H_{54}Cl_2N_{10}O_2S_2$ |
| **Molecular Weight** | : | 938.048 |
| **Target** | : | Bromodomain |
| **Solubility** | : | 10 mM in DMSO |



## Biological Activity

MS645 (MS-645) is a novel, bivalent bromodomain (BRD) inhibitor with Ki of 18.4 nM for tandem BD1-BD2 (**BRD4 BD1/BD2** ), shows12- to 28-fold gain in affinity for binding to the tandem BD1-BD2 over the single BD1 or BD2.
MS645 shows comparable potency to the tandem BD1-BD2 of BRD2 and BRD3 as to that of BRD4.
MS645 inhibits the transcription of BRD4 target gene IL-6 in MDA-MB-231 cells with 70% inhibition at 20 nM, much higher than 20-30% inhibition by JQ1 and MS417.
MS645 potently inhibits cell growth of a panel TNBC with IC50 of 4-20 nM, blocks BRD4 binding to transcription enhancer/mediator proteins MED1 and YY1 with potency superior to monovalent BET inhibitors JQ1.

## References

Ren C, et al. ***Proc Natl Acad Sci U S A.*** 2018 Jul 16. pii: 201720000.

**Caution: Product has not been fully validated for medical applications. Lab Use Only!**

E-mail: tech@probechem.com