

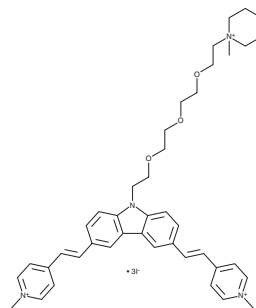
PRODUCT INFORMATION



BMVC-8C3O

Item No. 42109

CAS Registry No.: 1301708-12-2
Formal Name: 4,4'-[[[9-[2-[2-[2-[2-(1-methylpiperidinio)ethoxy]ethoxy]ethoxy]ethyl]-9H-carbazole-3,6-diyl]di-2,1-ethenediyl]bis[1-methyl-pyridinium], triiodide
MF: $C_{42}H_{53}N_4O_3 \cdot 3I$
FW: 1,042.6
Purity: $\geq 95\%$
Supplied as: A solid
Storage: -20°C
Stability: ≥ 4 years



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Laboratory Procedures

BMVC-8C3O is supplied as a solid. A stock solution may be made by dissolving the BMVC-8C3O in the solvent of choice, which should be purged with an inert gas. BMVC-8C3O is soluble (≥ 10 mg/ml) in DMSO.

Further dilutions of the stock solution into aqueous buffers or isotonic saline should be made prior to performing biological experiments. Ensure that the residual amount of organic solvent is insignificant, since organic solvents may have physiological effects at low concentrations. Organic solvent-free aqueous solutions of BMVC-8C3O can be prepared by directly dissolving the solid in aqueous buffers. BMVC-8C3O is sparingly soluble (1-10 mg/ml) in PBS (pH 7.2). We do not recommend storing the aqueous solution for more than one day.

Description

BMVC-8C3O is a G-quadruplex (G4) stabilizer.¹ It increases the melting temperature of human telomeres by 45°C in a potassium solution. BMVC-8C3O binds to G4 structures at the *EGFR* promoter ($K_d = 74.3$ and 246.4 nM for QFS1 and QFS2, respectively), reduces EGFR protein levels, and inhibits the growth of several non-small cell lung cancer (NSCLC) cell lines, including those resistant to osimertinib (AZD 9291; Item No. 16237), in a concentration-dependent manner.² *In vivo*, BMVC-8C3O (3 mg/kg) reduces tumor volume and weight in an H1975 NSCLC mouse xenograft model. It is also active against several strains of *M. tuberculosis* (MICs = 5.492 - 25 $\mu\text{g/ml}$) and inhibits *M. tuberculosis* polyketide synthase 13 (Pks13; $IC_{50} = 6.94$ μM), an enzyme involved in mycolic acid biosynthesis.³

References

1. Wang, Z.-F. and Chang, T.-C. Molecular engineering of G-quadruplex ligands based on solvent effect of polyethylene glycol. *Nucleic Acids Res.* **40**(17), 8711-8720 (2012).
2. Lu, K., Wang, H.-C., Tu, Y.-C., et al. EGFR suppression contributes to growth inhibitory activity of G-quadruplex ligands in non-small cell lung cancers. *Biochem. Pharmacol.* **216**, 115788 (2023).
3. Liu, T., Meng, J., Wang, B., et al. Identification of BMVC-8C3O as a novel Pks13 inhibitor with anti-tuberculosis activity. *Tuberculosis (Edinb)* **150**, 102579 (2025).

WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the [complete](#) Safety Data Sheet, which has been sent via email to your institution.

WARRANTY AND LIMITATION OF REMEDY

Buyer agrees to purchase the material subject to Cayman's Terms and Conditions. Complete Terms and Conditions including Warranty and Limitation of Liability information can be found on our website.

Copyright Cayman Chemical Company, 11/05/2025

CAYMAN CHEMICAL

1180 EAST ELLSWORTH RD
ANN ARBOR, MI 48108 · USA

PHONE: [800] 364-9897
[734] 971-3335

FAX: [734] 971-3640

CUSTSERV@CAYMANCHEM.COM
WWW.CAYMANCHEM.COM