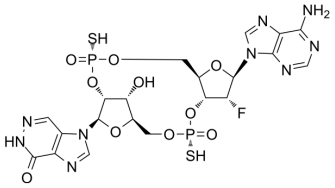
BI 7446

Cat. No.:	HY-155100
CAS No.:	2767011-00-5
Molecular Formula:	$C_{20}H_{22}FN_9O_{10}P_2S_2$
Molecular Weight:	693.52
Target:	STING
Pathway:	Immunology/Inflammation
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.



BIOLOGICAL ACTIVITY

Description

BI 7446 is a cyclic dinucleotide (CDN)-based potent and selective stimulator of interferon genes (STING) agonist. BI 7446 can activate all five STING variants in cells and induce tumor-specific immune-mediated tumor rejection. BI 7446 can be used for immuno-oncology research[1].

In Vitro

BI 7446 (CDN13) (3 μM, 10 μM, 6 h) increases IRF3 and TBK1 phosphorylation in THP1 STING-wild type cells[1].

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Western Blot Analysis[1]

Cell Line:	wild type and STING-knock out THP1 cells
Concentration:	3 μM, 10 μM
Incubation Time:	6 h
Result:	Observed a dose dependent increase of IRF3 and TBK1 phosphorylation in THP1 wild type cells but not in THP1 STING knockout cells.

In Vivo

BI 7446 (CDN13) (4, 12, 36 μg for intravenous injection, 0-25 h for detection time) has a high plasma clearance and a short elimination half-life in 4T1 BALB/c mouse tumor model[1].

BI 7446 (0.25, 1, 4 μg for subcutaneous injection, once weekly) generates tumor regression and a long-term immunologic memory against autologous tumor re-challenge in EMT6 mouse breast cancer model[1].

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Animal Model:	4T1 BALB/c mouse tumor model [1]
Dosage:	4, 12, 36 μg
Administration:	Intravenous injection (i.v.)
Result:	Observed a high plasma clearance and a short elimination half-life.

Animal Model:	EMT6 mouse breast cancer model[1]

Dosage:	0.25, 1, 4 μg
Administration:	Subcutaneous injection (s.c.)
Result:	Observed dose-dependent tumor regression even at the lowest tested dose. Impaired the growth of the EMT6 tumors.

REFERENCES

[1]. Kuttruff CA, et al. Discovery of BI 7446: A Potent Cyclic Dinucleotide STING Agonist with Broad-Spectrum Variant Activity for the Treatment of Cancer. J Med Chem. 2023 Jul 27;66(14):9376-9400.

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