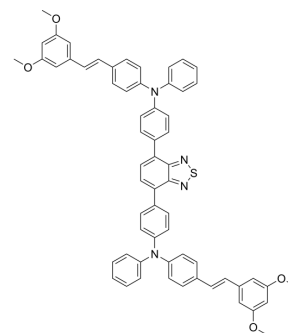


NF-κB-IN-9

Cat. No.:	HY-149838
Molecular Formula:	C ₆₂ H ₅₀ N ₄ O ₄ S
Molecular Weight:	947.15
Target:	NF-κB
Pathway:	NF-κB
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.



BIOLOGICAL ACTIVITY

Description	NF-κB-IN-9 is a nuclear factor kappa B (NF-κB) targeting sonosensitizer (λ _{ex} /λ _{em} =489/628 nm). NF-κB-IN-9 exhibits strong inhibition on NF-κB signaling due to its two resveratrol units in one molecule. NF-κB-IN-9 has anti-tumor activity and shows remarkable sonocytotoxicity against cancer cells. NF-κB-IN-9 has biosafety in xenograft mice model.
In Vitro	NF-κB-IN-9 (TR2) (1 nM-10 μM) shows NO production inhibition with an EC ₅₀ value of 68.9 nM in RAW 264.7 macrophages ^[1] . NF-κB-IN-9 (10 μM; 30 s ultrasonic treatment) inhibits MCF-7 cell proliferation and induces cell apoptosis. NF-κB-IN-9 shows sonocytotoxicity against MCF-7 cells with IC ₅₀ s of 1.6 μM, 0.55 μM, 0.29 μM for 30 s, 2 min, 5 min ultrasonic treatment time, respectively ^[1] . MCE has not independently confirmed the accuracy of these methods. They are for reference only.
In Vivo	NF-κB-IN-9 (TR2) (1.5 mg/kg; iv; at day 0 and 10, respectively) shows anticancer efficacy and good tolerance in xenograft mouse models. NF-κB-IN-9 can be detected fluorescence in the brain, suggesting that TR2 could penetrate the blood-brain barrier ^[1] . MCE has not independently confirmed the accuracy of these methods. They are for reference only.
Animal Model:	MCF-7 xenograft mouse model ^[1]
Dosage:	1.5 mg/kg
Administration:	Intravenous injection at day 0 and 10, respectively
Result:	Inhibited tumor growth with no significant decrease in body weight. Decreased the cytokine levels in the sera of mice by 42%, indicating TR2 induced an anti-inflammatory response.

REFERENCES

[1]. Li Y, et al. Design of Sonosensitizers Integrated with Resveratrol Motif for Synergetic Sonodynamic Therapy and Nuclear Factor Kappa B Transcription Suppression of Breast Cancer. *J Med Chem.* 2023 Apr 19.

Caution: Product has not been fully validated for medical applications. For research use only.

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