ODN 1826

Cat. No.:	HY-146245
CAS No.:	202668-42-6
Molecular Weight:	6364.1
Sequence:	DNA, d(P-thio)(T-C-C-A-T-G-A-C-G-T-T-C-C-T-G-A-C-G-T-T)
Target:	Toll-like Receptor (TLR); Apoptosis
Pathway:	Immunology/Inflammation; Apoptosis
Storage:	-20°C, sealed storage, away from moisture * In solvent : -80°C, 6 months; -20°C, 1 month (sealed storage, away from moisture)

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SOLVENT & SOLUBILITY

In Vitro

H_2O : 50 mg/mL (7.86 mM; Need ultrasonic)

Preparing Stock Solutions	Mass / Solvent / Concentration	1 mg	5 mg	10 mg
	1 mM	0.1571 mL	0.7857 mL	1.5713 mL
	5 mM	0.0314 mL	0.1571 mL	0.3143 mL
	10 mM	---	---	---

Please refer to the solubility information to select the appropriate solvent.

BIOLOGICAL ACTIVITY

Description

ODN 1826 (CpG 1826), a class B CpG ODN (oligodeoxynucleotide), is a TLR9 agonist. ODN 1826 promotes Apoptosis. ODN 1826 is an excellent immune stimulator with antitumor activity. ODN 1826 has protective effects on the heart. ODN 1826 sequence: 5'-tccatgacgttcctgacgtt-3'[1][2][3][4].

IC_{50} & Target

TLR9

In Vitro

ODN 1826 (1 μg/mL, 24 h) can stimulate the production of NO and iNOS in RAW 264.7 cells [2].

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

Western Blot Analysis[2]

Cell Line:	RAW 264.7
Concentration:	1 μg/mL
Incubation Time:	24 h
Result:	Increased the production of NO and iNOS.

In Vivo

ODN 1826 (18 nM, subcutaneous injection, 3 times a week for 7 weeks) increases aortic atherosclerotic plaque size in a mouse model of chronic vascular injury [1].

ODN 1826 (0.05 mg, intraperitoneally injected , 1, 3, 5, 8, 11, 13 days) has a strong anti-tumor growth effect[3].

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

Animal Model:	Chronic vascular injury mouse models[1]
Dosage:	18 nM CPG ODN
Administration:	s.c, three times a week for 7 weeks
Result:	Increased in aortic atherosclerotic plaque size compared to vehicle.

Animal Model:	Lewis Lung Cancer Murine Tumor Model[3]
Dosage:	0.05 mg (1, 3, 5, 8, 11, 13 days)
Administration:	Intraperitoneal injection (i.p.)
Result:	Delayed tumor growth,decreased tumor weight and increased the apoptosis of tumor cells.

REFERENCES

[1]. Krogmann AO, et al. Proinflammatory Stimulation of Toll-Like Receptor 9 with High Dose CpG ODN 1826 Impairs Endothelial Regeneration and Promotes Atherosclerosis in Mice. PLoS One. 2016 Jan 11;11(1):e0146326.

[2]. Utaisincharoen P, et al. CpG ODN activates NO and iNOS production in mouse macrophage cell line (RAW 264.7). Clin Exp Immunol. 2002 Jun;128(3):467-73.

[3]. Yuan S, et al. CpG oligodeoxynucleotide 1826 enhances the Lewis lung cancer response to radiotherapy in murine tumor. Cancer Biother Radiopharm. 2011 Apr;26(2):203-8.

[4]. Zhang X, et al. The toll-like receptor 9 agonist, CpG-oligodeoxynucleotide 1826, ameliorates cardiac dysfunction after trauma-hemorrhage. Shock. 2012 Aug;38(2):146-52.

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