ODN2041-Non-CpG ODN. In vitro control for rabbit cells. (Antigen grade)

□ **Cat #ODN2041-1** ODN2041-Non-CpG ODN. In vitro control for rabbit cells antigen grade **Size: 1 mg**

CpG oligodeoxynucleotides (or CpG ODN) are short single-stranded synthetic DNA molecules that contain an unmethylated CG (Cytosine–guanine) di nucleotide in a specific base sequence (CpG motifs).The p refer to the phosphodiester backbone. These CpG motifs are not seen in eukaryotic DNA are considered pathogen-associated molecular patterns (PAMPs).The CpG PAMP is recognized by (TLR9).3 types of, inhibitory ODNS have been identified.

Class A stimulate the production of large amounts of Type I interferons, induce the maturation of pDCs. They are also strong activators of NK cells through indirect cytokine signaling.

Class B ODN is strong stimulators of human B cell and monocyte maturation. They also stimulate the maturation of pDC but to a lesser extent than Class A ODN and very small amounts of IFNα.

Class C ODN combine features of both type A and B. They contain a complete phosphorothioate backbone and a CpG-containing palindromic motif. They induce strong IFN-α production from DC and B cell stimulation.

ODN 2041 is a prototype of non-CpG oligodeoxynucleotides (ODN) that is not able to stimulate rabbit PBMC in vitro. The vertebrate immune system has evolved innate immune defense pattern recognition receptors (PRRs) that detect unmethylated cytosine-phosphate-guanine (CpG) motifs within bacterial DNA. Cellular activation by CpG motifs occurs via the Toll signal pathway. Non-CpG-DNA can be used as control and as inhibitor in biological assays in vitro for rabbit cells.

Cat#ODN2041-1

Sequence	5'-ctggtctttctggtttttttctgg-3
Purity	≥95%
Form and storage	Powder. Store at -20C up to 1 year.
Shipping	Shipped at 4° C
Endotoxin	<0.0002 EU/µg
Solubility	water, PBS or other buffers (up to 5 mg/ml)

Notes:

1) Bases in capital are phosphodiester and those in lower case are phosphorothioate. Palindromic sequences are underlined.

General references: Krieg A.M(1995). Nature, 374(6522):546-9.Ballaz ZK(2001) 167(9). Bauer, (2001). PNAS.98(16):9237-42. Bauer, (2001).PNAS98(16):9237-42 Ioannou, X; (2003),*21:* 4368

for in vitro research only

Related Items

Catalog#	ProdDescription
ODN006-1	ODNBW006 Type B CpG ODN structure feature at the 5' and A-type CpG ODN structure feature at the 3' end
ODN1668-1	ODN 1668-Type B murine TLR9 Agonist-Antigen grade
ODN1668-1NC	ODN 1668- Type B murine TLR9 Agonist (Negative Control), antigen grade
ODN1826-1	ODN 1826- Type B murine TLR9 Agonist-antigen grade
ODN2006-1	ODN 2006 -Type B-human TLR9 agonist-antigen grade
ODN2007-1	ODN 2007-Type B bovine/porcineTLR9 agonist-antigen grade
ODN2216-1	ODN 2216-Type A human TLR9 Agonist.-antigen grade
ODN2395-5	ODN 2395-Type C human/murine TLR9 agonist-antigen grade
ODN4084F-1	ODN 4084-Type B Inhibitory TLR9 Antagonist.-antigen grade
ODN4084F-5	ODN 4084-Type B Inhibitory TLR9 Antagonist.-antigen grade
ODNTT-1NC	ODN TTAGGG-Class G Human-TLR 9 Antagonist, antigen grade
SIODN-1	Inhibitory iODN- class I/II hybrid, may also affect TLR7 and TLR8 signaling.

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