

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 IFN α .

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.

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|-------------------------|---|
| Sequence | 5'-ctggctcttctggtttttctgg-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 |
| ODN1668-1NCODN | 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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