□ **Cat. #ODN2336-1**	ODN 2336- Type A human specific TLR9 Agonist, antigen grade	**Size: 1 mg**
□ **Cat. #ODN2336-5**	ODN 2336- Type A human specific TLR9 Agonist, antigen grade	**Size: 5 mg**
□ **Cat. # ODN2336-1NC**	ODN 2336- Type A human specific TLR9 Agonist (Negative Control), antigen grade	**Size: 1 mg**
□ **Cat. # ODN2336-5NC**	ODN 2336- Type A human specific TLR9 Agonist (Negative Control), antigen grade	**Size: 5 mg**
□ **Cat. # ODN2336-F**	ODN 2336- Type A human specific TLR9 Agonist FITC Conjugate, antigen grade	**Size: 50 ug**
□ **Cat. # ODN2336-B**	ODN 2336- Type A human specific TLR9 Agonist Biotin Conjugate, antigen grade	**Size: 50 ug**

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, stimulatory ODNS have been identified based upon immunostimulatory activities.

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 bovine/porcrine 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 types 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 2336 is a TLR9. Type A human specific TLR9 agonist.

Cat. #:ODN2336–1 & ODN2336-5

Sequence	5'-gggGACGACGTCGTGgggggg-3' (21 mer)
Purity	≥95%
Form and storage	Powder. After reconstitution, Store at -20C up to 1 year
Shipping	Shipped at 4° C
Endotoxin	<0.002 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.
2) Negative control Contains GpC nucleotides instead of CpG.

Cat. #:ODN2336-1NC & Cat.#:ODN2336-5NC (negative control)

Sequence	5'- gggGAGCAGCTGCTGgggggg -3' (21 mer)
Purity	≥95%
Form and Storage	Powder. After reconstitution, Store at -20C up to 1 year
Shipping	Shipped at 4° C
Endotoxin	<0.002 EU/µg
Solubility	water, PBS or other buffers (up to 5 mg/ml)

Cat.#:ODN2336-F, FITC Conjugate

Sequence	5'-gggGACGACGTCGTGgggggg-FITC (21 mer)
Purity	≥95%
Form and Storage	Powder. After reconstitution, Store at -20C up to 1 year
Shipping	Shipped at 4° C
Endotoxin	<0.002 EU/µg
Solubility	water, PBS or other buffers (up to 5 mg/ml)

Cat.#:ODN2336-B, Biotin Conjugate

Sequence	5'-gggGACGACGTCGTGgggggg-Biotin' (21 mer)
Purity	≥95%
Form and Storage	Powder. After reconstitution, Store at -20C up to 1 year
Shipping	Shipped at 4° C
Endotoxin	<0.002 EU/µg
Solubility	water, PBS or other buffers (up to 5 mg/ml)

General references: Krieg, A.M nature. Ballaz ZK(2001) 167(9). Bauer, (2001).PNAS98(16):9237-42 Zhongguo Shi (2009) 17(4):874-8.

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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