

Product Specification Sheet

**ODN 2395 - Type C human/murine TLR9 agonist-Controls and Conjugates (antigen grade)**

□ <b>Cat. #ODN2395-1</b>	ODN 2395- Type C human/ murine TLR9 Agonist, antigen grade	<b>Size: 1 mg</b>
□ <b>Cat. #ODN2395-5</b>	ODN 2395- Type C human/ murine TLR9 Agonist, antigen grade	<b>Size: 5 mg</b>
□ <b>Cat. # ODN2395-1NC</b>	ODN 2395- Type C human/ murine TLR9 Agonist (Negative Control), antigen grade	<b>Size: 1 mg</b>
□ <b>Cat. # ODN2395-5NC</b>	ODN 2395- Type C human/murine TLR9 Agonist (Negative Control), antigen grade	<b>Size: 5 mg</b>
▪ <b>Cat. # ODN2395-F</b>	ODN 2395- Type C human/ murine TLR9 Agonist <b>FITC</b> Conjugate, antigen grade	<b>Size: 50 µg</b>

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 are strong stimulators of bovine/porcine 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 $\alpha$ .

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- $\alpha$  production from DC and B cell stimulation.

**ODN 2395** is a Class C ODN which stimulates B cells but also induces increased level of IFN-alpha production from PDCs. In asthma, as well as cancer studies, this ODN has been used to induce eosinophil-based dendritic cell maturation.

**Cat. #:ODN2395-1 & ODN2395-5**

<b>Sequence</b>	5'-tcgctgtttcggcgcgccg-3 (22 mer)
<b>Mol. Wt</b>	7047.6
<b>Purity</b>	≥95%
<b>Form and storage</b>	Powder. After reconstitution, Store at -20C up to 1 year
<b>Shipping</b>	Shipped at 4° C
<b>Endotoxin</b>	<0.002 EU/µg
<b>Solubility</b>	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. #ODN2395-1NC & Cat. #ODN2395-5NC (negative control)**

<b>Sequence</b>	5'-tgctgcttttggggggccccc-3' (22 mer)
<b>Mol. Wt.</b>	
<b>Purity</b>	≥95%
<b>Form and Storage</b>	Powder. After reconstitution, Store at -20C up to 1 year.
<b>Shipping</b>	Shipped at 4° C
<b>Endotoxin</b>	<0.002 EU/µg
<b>Solubility</b>	water, PBS or other buffers (up to 5 mg/ml)

**Cat. #:ODN2395-F, FITC Conjugate**

<b>Sequence</b>	5'-tcgctgtttcggcgcgccg-FITC' (22 mer)
<b>Purity</b>	≥95%
<b>Form and Storage</b>	Powder. After reconstitution, Store at -20C up to 1 year.
<b>Shipping</b>	Shipped at 4° C
<b>Endotoxin</b>	<0.002 EU/µg
<b>Solubility</b>	water, PBS or other buffers (up to 5 mg/ml)

**General references:** Krieg,A.M(1995). Nature, 374(6522):546-9. Ballaz ZK(2001) 167(9). Bauer, (2001).PNAS.98(16):9237-42. Ramin Lotfi Thomas Leukocyte Biology. (2008);83:

**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-1ODN 4084-Type B Inhibitory TLR9 Antagonist.-antigen grade  
 ODN4084F-5ODN 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.

**ODN2395**

rev130225P