



Product Specification Sheet

**AT-ODN-2-Non-CpG AT rich ODN.TLR9 agonist (Antigen grade)**

☐ **Cat. #ATODN2-1**

AT-ODN-2- Non-CpG AT rich ODN.TLR9 agonist antigen grade

**Size: 100 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, inhibitory ODNs have been identified.

Class B INH-ODNs are broadly reactive linear ODNs that potently block CpG-induced activation in all TLR9-expressing cells.

Class R INH-ODNs are capable of making significant secondary structures and are less active in resting B cells.

Class G. Class G INH-ODNs contain multiple G3 triplets (like telomeric repeats) or G4 tetrads and are capable of making large G-aggregates. They inhibit not only signaling through the TLR9, but also activation through other TLRs. They are directly pro apoptotic in tumor cells and can additionally block stimulation of other immune cells.

Although the AT-ODN does not contain any CpG sequences, it exerts mitogenic activity in B cells and augments Th-1-type immune responses via Toll-like receptor. It has been shown that AT-ODNs with a specific loop and stem structure are important factors for immunostimulatory activity.

**AT-ODN-2** is a *Lactobacillus gasseri*-derived non-CpG ODN of the AT-type; TLR9 dependent immune activation

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<b>Sequence</b>	<b>5'-<i>tataat</i>ttttaccactagc-3' (22 mer)</b>
<b>Mol. Wt</b>	6374
<b>Purity</b>	≥95%
<b>Form and storage</b>	Powder. 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:**

Nucleotides depicted in italics show AT-ODN sequence.

**General references:** Krieg,A.M(1995).Nature. Ballaz ZK(2001) 167(9). Bauer, (2001).PNAS98 (16):9237-42 Shimosato T (2006) 8(3):485-95 Cell Microbiol.

*\*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-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  
 SIDON-1 Inhibitory iODN- class I/II hybrid, may also affect TLR7 and TLR8 signaling.

**ATODN-2**

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