



Genemed Synthesis, Inc.  
6203 Wood Lake Center Dr., Bldg. 2, San Antonio, TX 78244, USA  
Toll free (800) 344-5337; Phone: (210) 745-5988; Fax (210) 745-5992  
Email: [info@genemedsyn.com](mailto:info@genemedsyn.com), Website: [www.genemedsyn.com](http://www.genemedsyn.com)

Product Specification Sheet

**AT-ODN-1-\_-Non-CpG AT rich ODN.TLR9 agonist. (Antigen grade)**

Cat. #ATODN1-1

AT-ODN-1-\_-Non-CpG AT rich ODN.TLR9 agonist 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 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-1** is an IFN- $\gamma$  inducing non-CpG ODN of the AT-type, found in the Malaria genome; it has TLR9 dependent immune activation

**Cat. #ATODN1-1**

<b>Sequence</b>	5'- <i>tataat</i> <b>tttaattccaaga</b> -3' (20 mer)
<b>Mol. Wt</b>	6413
<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:**

- 1) Nucleotides depicted in italics show AT-ODN sequence.

**General references:** Krieg, A.M nature. Ballaz ZK(2001) 167(9). Bauer, (2001).PNAS98(16):9237-42 3 P. S. Lenert, (2003)*Arthritis Research and Therapy*, (8), no. 1, article R203

**Related Items**

ODN1585-1, ODN1668-1, ODN1826-1, ODN2006-1, ODN2336-1, ODN2395-1, ODN2007-1, ODNM362-1, ODN2088-1 ODN2216-1, ODNINH1-1, ODN4084F-1, ODNIHN1-1, ODNIHN47-1, ODNNTT-1, GODN-1, CIODN-1, SIODN-1, DIODN-1, ATODN2-1, ATODN3-1

**ATODN1-1**

**071312V**