

Product Specification Sheet

ODN 2088 Class I-Murine TLR9 Antagonist.-Controls and Conjugates (antigen grade)

□ Cat. #ODN2088-1	ODN 2088- Class I-Murine TLR9 Antagonist, antigen grade	Size: 1 mg
□ Cat. #ODN2088-5	ODN.2088- Class I-Murine TLR9 Antagonist antigen grade	Size: 5 mg
□ Cat. #ODN2088-1NC	ODN 2088- Class I-Murine TLR9 Antagonist (Negative Control), antigen grade	Size: 1 mg
□ Cat. #ODN2088-5NC	ODN 2088- Class I human/murine TLR9 Agonist (Negative Control), antigen grade	Size: 5 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, stimulatory ODNs have been identified based upon immunostimulatory activities.

Three major classes of immunostimulatory CpG-ODNs are well characterized Class A stimulate the production of large amounts of Type I interferons and are strong activators of NK cells through indirect cytokine signaling. Class B ODN is strong stimulators of human B cell and monocyte maturation. 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 pDC and B cell stimulation.

Several groups have studied the sequence requirements, specificity, signaling pathways and kinetics of the TLR (Toll-like receptor) 9 suppression by 'inhibitory DNA motifs', which led to a revised classification of inhibitory ODNs.

Class I: G-stretch ODNs: TLR9-specific competitors, some iODNs may also affect TLR7 and TLR8 signaling

Class II: ODNs with telomeric repeats: TLR-independent inhibitors of STAT signaling (cellular uptake via an "ODN receptor"?)

Class III: Inhibitors of DNA uptake in a sequence independent manner

Class IV: Long phosphorothioate ODNs as direct competitors of TLR9 signaling in a sequence independent manner

ODN2088 is a Class I inhibitory ODN. These ODNs are TLR9-specific competitors that may also affect TLR7 and TLR8 signaling.TLR9-specific competitors. Inhibitory ODNs act by disrupting the co localization of CpG ODNs.

Cat. #:ODN2088-1 & ODN2088-5

Sequence	5'-tcctggcggggaagt-3' (15 mer)
Mol. Wt	4887
Purity	≥95%
Form and storage	Powder. 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 has replaced bases in inhibitory sequence. Contains Gp

Cat. #:ODN2088-1NC & Cat. #:ODN2088-5NC (negative control)

Sequence	5'-tcctgagctgaagt-3' (15 mer)
Mol. Wt.	4887
Purity	≥95%
Form and Storage	Powder. 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(1995).Nature, 374(6522):546-9..Ballaz ZK(2001) 167(9). Bauer, (2001).PNAS.98(16):9237-42. Gursel (2003). J Immunol. 171(3):1393-400. Stunz LL (2002). Eur J Immunol. 32(5): 1212-22

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.

ODN2088

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