Dual-iODN (class I) (endotoxin-free) (synthetic) (BULK)

Inhibitor of TLR7 and TLR9

Inhibitory iODN oligodeoxynucleotide with phosphorothioate backbone. Sequence of an inhibitory ODN for *in vivo* use in rodents (50-150µg per injection): prototype class I that potently inhibits TLR9 and TLR7 signaling.

Several groups have studied the sequence requirements, specificity, signalling pathways and kinetics of the TLR (Toll-like receptor) 9 suppression by 'inhibitory DNA motifs', which led to a revised classification of iODNs, that is independent of the previously thought species preference.
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 signalling (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
Slightly modified phosphodiester versions of the most potent inhibitory ODNs were also able to profoundly block the immune activation of macrophages and proved to be valuable tools for in vivo use in experimental animal models of inflammatory and auto-immune diseases.

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ALX-746-355-M001	1mg

Manuals, SDS & CofA View Online »

Handling & Storage

Use/Stability	As indicated on product label or CoA when stored as recommended. Aqueous stock solution is stable for 1 day when stored at +4°C.
Long Term Storage	+4°C
Shipping	Ambient Temperature

Regulatory Status

RUO - Research Use Only

Product Details

Couple Target	TLR, TLR7, TLR9
Couple Type	Inhibitor, Ligand
Endotoxin Content	<0.002 EU/µg (LAL test)
Formulation	Lyophilized. Sterile.
MW	5867 (ammonium salt)
Quantity	~170nmol (1’000µg). Working concentration depends upon concentration, type and MW of stimulating CpG ODN, the cellular system and read-out used. Titrate at 3-10 fold molar excess for inhibition.
Reconstitution	For a 200µM stock solution, dissolve the total vial content in 852µl endotoxin-free ddWater (Prod. No. ALX-505-008) or endotoxin-free PBS (Prod. No. ALX-505-007). To obtain optimal dissolving we recommend the following procedure:- Add 50% of the solvent and let dissolve for 10 min.- Add remaining 50% of the solvent and mix thoroughly.- Moderate warming may aid dissolving.
Sequence	5’-tgctcctggaggggttgt-3’(lower case letters indicate phosphorothioate linkage).
Source	Synthetic.
Technical Info / Product Notes	Includes 1 vial of ddWater (endotoxin-free) (Prod. No. ALX-505-008).

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