ODN 21798 Control (ODN 23098)

Order no. 130-100-285
Order no. 130-100-284

Contents

1. Description
2. Background information
3. Applications
   - 3.1 General applications
   - 3.2 Specific applications
4. Instructions for use
   - 4.1 Recommended concentrations
   - 4.2 Reconstitution protocol
5. References

1. Description

Components	**130-100-285:** 200 µg lyophilized ODN 1 mL 1× TE Buffer or **130-100-284:** 1 mg lyophilized ODN 1 mL 1× TE Buffer.
Description	P-class control oligodeoxyribonucleotide (ODN).
Product format	Lyophilized product without carrier protein or preservatives.
Sequence	dT*dG-dC*dT*dC-dG*dA*dC-dG*dA*dT*dC-dG*dG*dC*dG*dC-dG*dC*dG*dC*dC*dG * Phosphorothioate backbone
Endotoxin level	Low endotoxin (<1 EU/mg) as determined by kinetic Limulus Amebocyte Lysate (LAL) assay.
Storage	Store lyophilized product at –20 °C. Upon reconstitution, aliquots should be stored at –20 °C and are stable for 6 months. Avoid repeated freeze-thaw cycles. The expiration date is indicated on the vial label.

2. Background information

TLR9 is a prominent member of the toll-like-receptor (TLR) family recognizing pathogen-associated molecular patterns. TLR9 recognizes specifically unmethylated CpG motifs in bacterial DNA leading to activation of immune cells[1,2].
These effects can be mimicked by short synthetical ODNs containing unmethylated CpG motifs[3].
Control compounds for CpG ODNs share the sequence with their stimulatory counterparts but contain GpC dinucleotides instead of the CpG motifs and thus control for the CpG specificity of the effects.

3. Applications

- ODN 21798 Control (ODN 23098) can be used as a sequence control for P-class ODN 21798 (# 130-100-281, # 130-100-280).

4. Instructions for use

4.1 Recommended concentrations

Recommended concentrations for use are

for human and murine immune cells: 0.05–2 µM

for recombinant cell lines: 0.05–10 µM

4.2 Reconstitution protocol

1. Spin down pellet.
2. a) For 200 µg lyophilized ODN:
   To obtain a 200 µM solution resuspend pellet in 137 µL of 1× TE Buffer.
   ▲ **Note:** Alternatively, PBS or water can be used for reconstitution.

   b) For 1 mg lyophilized ODN:
   To obtain a 200 µM solution resuspend pellet in 685 µL of 1× TE Buffer.
   ▲ **Note:** Alternatively, PBS or water can be used for reconstitution.
3. Vortex and incubate overnight at 4 °C.
4. Store aliquots at –20 °C.

5. References

1. Hemmi, H. *et al.* (2000) A Toll-like receptor recognizes bacterial DNA. Nature 408: 740–745.
2. Krieg, A. M. *et al.* (1995) CpG motifs in bacterial DNA trigger direct B-cell activation. Nature 374: 546–549.
3. Bauer, S. *et al.* (2001) Human TLR9 confers responsiveness to bacterial DNA via species-specific CpG motif recognition. Proc. Natl. Acad. Sci. U.S.A. 98: 9237–9242.

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140-004-118.02

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