ODN 1982

Order no. 130-100-104
Order no. 130-100-277

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1. Description

Components	**130-100-104:** 200 µg lyophilized ODN 1 mL 1× TE Buffer or **130-100-277:** 1 mg lyophilized ODN 1 mL 1× TE Buffer.
Description	B-class control oligodeoxyribonucleotide (ODN).
Product format	Lyophilized product without carrier protein or preservatives.
Sequence	dT*dC*dC*dA*dG*dG*dA*dC*dT*dT*dC*dT* dC*dT*dC*dA*dG*dG*dT*dT * 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 synthetic ODNs containing unmethylated CpG motifs[3].

3. Applications

- ODN 1982 can be used as a control for CpG ODN, especially B-class CpG ODN.

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 157 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 785 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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