Miltenyi Biotec

ODN 2088

Order no. 130-105-815
Order no. 130-105-816

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	**130-105-815:** 200 µg lyophilized ODN 1 mL 1× TE Buffer or **130-105-816:** 1 mg lyophilized ODN 1 mL 1× TE Buffer.
Description	TLR7/8/9 antagonist.
Product format	Lyophilized product without carrier protein or preservatives.
Sequence	dT*dC*dC*dT*dG*dG*dC*dG*dG*dG*dG*dA*dA*dG*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

TLR7, TLR8, and TLR9 are prominent members of the toll-like-receptor (TLR) family recognizing pathogen-associated molecular patterns recognizing nucleic acids.[3] Activation of these TLRs can be inhibited by short single-stranded synthetical oligodeoxyribonucleotides (ODNs).[4,6] Several classes of and motifs for inhibitory ODN have been identified.[1,6,7]

3. Applications

3.1 General applications

- TLR7/8/9 antagonists can be used to inhibit TLR7/8/9-mediated cellular responses, such as activation of immune cells, human PBMCs, murine splenocytes, or isolated immune cells, e.g., B cells and pDCs.
- TLR7, TLR8, or TLR9 antagonists can be used to inhibit signaling in TLR7/8/9-expressing recombinant cell lines.

3.2 Specific applications

- ODN 2088 is a widely used inhibitory ODN inhibiting TLR7, TLR8, and TLR9.[1,2,4-7] ODN 2088 forms tertiary structures (G tetrads).

4. Instructions for use

4.1 Recommended concentrations

Recommended concentrations for use are

for human and murine immune cells: 0.05–5 µM

for recombinant cell lines: 0.05–10 µM

The optimal concentration range needs to be tested for individual assay systems.

4.2 Reconstitution protocol

1. Spin down pellet.
2. a) For 200 µg lyophilized ODN:
   To obtain a 200 µM solution resuspend pellet in 205 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 1026 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.

Miltenyi Biotec B.V. & Co. KG
Friedrich-Ebert-Straße 68, 51429 Bergisch Gladbach, Germany
Phone +49 2204 8306-0, Fax +49 2204 85197
macsde@miltenyi.com
www.miltenyibiotec.com

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5. References

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