

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

This product is for research use only.

Components	130-112-563: 50 mg lyophilized ORN 5 mL sterile, physiological NaCl solution or 130-112-562: 5× 50 mg lyophilized ORN 5× 5 mL sterile, physiological NaCl solution.
Description	TLR3 agonist, double-stranded oligoribonucleotide (ORN).
Product format	Lyophilized ORN without carrier protein or preservatives. Sterile filtered; always handle under aseptic conditions.
Sequence	Hybridized polyinosinic acid p[rI] _n ; polycytidylic acid p[rC] _n , poly (I:C)
Endotoxin level	Low endotoxin (<1 EU/mg) as determined by kinetic Limulus Amebocyte Lysate (LAL) assay.
Storage	Store 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

TLR3 is a member of the toll-like-receptor (TLR) family recognizing pathogen-associated molecular patterns.¹ TLR3 recognizes (virally derived) double- or single-stranded RNA leading to activation of immune cells. The natural ligands for TLR3 can be mimicked by synthetic RNAs (oligoribonucleotides; ORNs) like polyinosinic-polycytidylic acid (poly (I:C)), which hybridizes to form RNA double strands in aqueous solutions with ionic strength.

Poly (I:C) can activate the nuclear transcription factor NF-κB¹ as well as stimulate the production of type I interferons (IFNs) leading to cytokine secretion^{2,3}. Poly (I:C) is one of the most potent agonists for the maturation of myeloid dendritic cells (mDCs)⁴. Additionally, maturation markers like CD80 are activated upon treatment of dendritic cells (DCs) with poly (I:C).

3. Applications

3.1 General applications

- Poly (I:C) can be used for the activation of immune cells, such as dendritic cells (DCs).
- Antiviral activity

3.2 Specific applications

- Cytokine secretion like interleukin 12 (IL-12)
- Maturation of DCs

4. Instructions for use

4.1 Recommended concentrations

The working concentration of Poly (I:C) ranges from 30 ng to 10 µg per mL.

4.2 Reconstitution protocol

1. Spin down pellet.
2. To obtain a 20 mg/mL solution resuspend pellet in 2.5 mL of the sterile, physiological NaCl solution.
3. Mix until complete solubilization.
4. Store aliquots at -20 °C.
5. Prior to use, warm to 65 °C and cool-down slowly to achieve reannealing.

5. References

1. Ranjith-Kumar, C. T. *et al.* (2007) Biochemical and functional analysis of the human toll-like receptor 3 ectodomain. *J. Biol. Chem.* 282: 7668–7678.
2. Alexopoulou, L. *et al.* (2001) Recognition of double-stranded RNA and activation of NF- κ B by toll like receptor-3. *Nature* 413: 732–738.
3. Kato, H. *et al.* (2008) Length-dependent recognition of double-stranded ribonucleic acids by retinoic acid inducible gene-1 and melanoma differentiation associated gene 5. *J. Exp. Med.* 205: 1601–1610.
4. Rouas, R. *et al.* (2004) Poly (I:C) used for human dendritic cell maturation preserves their ability to secondarily secrete bioactive IL-12. *Int. Immunol.* 16: 767–773.

Refer to www.miltenyibiotec.com for all data sheets and protocols. Miltenyi Biotec provides technical support worldwide. Visit www.miltenyibiotec.com/local to find your nearest Miltenyi Biotec contact.

Legal notices

Limited product warranty

Miltenyi Biotec B.V. & Co. KG and/or its affiliate(s) warrant this product to be free from material defects in workmanship and materials and to conform substantially with Miltenyi Biotec's published specifications for the product at the time of order, under normal use and conditions in accordance with its applicable documentation, for a period beginning on the date of delivery of the product by Miltenyi Biotec or its authorized distributor and ending on the expiration date of the product's applicable shelf life stated on the product label, packaging or documentation (as applicable) or, in the absence thereof, ONE (1) YEAR from date of delivery ("Product Warranty"). Miltenyi Biotec's Product Warranty is provided subject to the warranty terms as set forth in Miltenyi Biotec's General Terms and Conditions for the Sale of Products and Services available on Miltenyi Biotec's website at www.miltenyibiotec.com, as in effect at the time of order ("Product Warranty"). Additional terms may apply. BY USE OF THIS PRODUCT, THE CUSTOMER AGREES TO BE BOUND BY THESE TERMS. THE CUSTOMER IS SOLELY RESPONSIBLE FOR DETERMINING IF A PRODUCT IS SUITABLE FOR CUSTOMER'S PARTICULAR PURPOSE AND APPLICATION METHODS.

Technical information

The technical information, data, protocols, and other statements provided by Miltenyi Biotec in this document are based on information, tests, or experience which Miltenyi Biotec believes to be reliable, but the accuracy or completeness of such information is not guaranteed. Such technical information and data are intended for persons with knowledge and technical skills sufficient to assess and apply their own informed judgment to the information. Miltenyi Biotec shall not be liable for any technical or editorial errors or omissions contained herein.

All information and specifications are subject to change without prior notice. Please contact Miltenyi Biotec Technical Support or visit www.miltenyibiotec.com for the most up-to-date information on Miltenyi Biotec products.

Licenses

This product and/or its use may be covered by one or more pending or issued patents and/or may have certain limitations. Certain uses may be excluded by separate terms and conditions. Please contact your local Miltenyi Biotec representative or visit Miltenyi Biotec's website at www.miltenyibiotec.com for more information.

The purchase of this product conveys to the customer the non-transferable right to use the purchased amount of the product in research conducted by the customer (whether the customer is an academic or for-profit entity). This product may not be further sold. Additional terms and conditions (including the terms of a Limited Use Label License) may apply.

CUSTOMER'S USE OF THIS PRODUCT MAY REQUIRE ADDITIONAL LICENSES DEPENDING ON THE SPECIFIC APPLICATION. THE CUSTOMER IS SOLELY RESPONSIBLE FOR DETERMINING FOR ITSELF WHETHER IT HAS ALL APPROPRIATE LICENSES IN PLACE. Miltenyi Biotec provides no warranty that customer's use of this product does not and will not infringe intellectual property rights owned by a third party. BY USE OF THIS PRODUCT, THE CUSTOMER AGREES TO BE BOUND BY THESE TERMS.

Trademarks

The Miltenyi Biotec logo is a registered trademark or trademark of Miltenyi Biotec and/or its affiliates in various countries worldwide.

Copyright © 2020 Miltenyi Biotec and/or its affiliates. All rights reserved.