

Certificate of Analysis

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Product Name: Poly(I:C)

Catalog No.: 4287

Batch No.: 4

CAS Number: 42424-50-0

IUPAC Name: Polyinosinic-polycytidylic acid sodium salt

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: $(C_{10}H_{13}N_4O_8P)_x \cdot (C_9H_{14}N_3O_8P)_x$

Physical Appearance: White solid

Solubility: water to 3 mg/ml

Storage: Store at -20°C

Caution - Not Fully Tested • Research Use Only • Not For Human or Veterinary Use

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Description:

Poly(I:C) is a synthetic double-stranded RNA (dsRNA); endosomal Toll-like receptor 3 (TLR3) agonist. It also binds to the cytoplasmic receptors, retinoic acid-inducible gene I (RIG-I) and melanoma differentiation-associated gene 5 (MDA-5), elicits the secretion of type I interferon (IFN) and pro-inflammatory cytokines. Poly(I:C) is commonly used for immune system activation in vivo. Poly(I:C) also promotes maturation of hPSC-derived cardiomyocytes by modulating early Notch signaling and cardiomyogenic transcriptional programs. Poly(I:C) promotes generation of stable, mature dendritic cells in combination with TLR8 agonist CL 075 (Cat. No. 614... Please see product specific page on www.tocris.com for full description.

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Solubility & Usage Info:

water to 3 mg/ml

Stability and Solubility Advice:

Some solutions can be difficult to obtain and can be encouraged by rapid stirring, sonication or gentle warming (in a 45-60°C water bath).

Information concerning product stability, particularly in solution, has rarely been reported and in most cases we can only offer a general guide. Our standard recommendations are:

SOLIDS: Provided storage is as stated on the product label and the vial is kept tightly sealed, the product can be stored for up to 6 months from date of receipt.

SOLUTIONS: We recommend that stock solutions, once prepared, are stored aliquoted in tightly sealed vials at -20°C or below and used within 1 month. Wherever possible solutions should be made up and used on the same day.

References:

Waele et al (2021) A systematic review on poly(I:C) and poly-ICLC in glioblastoma: adjuvants coordinating the unlocking of immunotherapy. *J.Exp.Clin.Cancer Res.* **40** 213. PMID: 34172082.

Biermann et al (2019) Epigenetic priming of human pluripotent stem cell-derived cardiac progenitor cells accelerates cardiomyocyte maturation. *Stem Cells* **37** 910. PMID: 31087611.

West et al (2011) TLR signalling augments macrophage bactericidal activity through mitochondrial ROS. *Nature* **472** 476. PMID: 21525932.

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