

Poly(A:U)

Synthetic analog of dsRNA; TLR3 ligand

Catalog code: tlrl-pau

<https://www.invivogen.com/polyau>

For research use only

Version 18J21-MM

PRODUCT INFORMATION

Contents

- 10 mg lyophilized poly(A:U)

Note: Poly(A:U) is sterile filtered prior to lyophilization.

- 10 ml sterile physiological water

Storage and stability

- Poly(A:U) is shipped at room temperature and should be stored at 2-8°C. Lyophilized product is stable for 1 year at 2-8°C when properly stored.
- Upon resuspension, prepare aliquots of Poly(A:U) and store at 2-8°C or -20°C. Resuspended product is stable for 1 month at 2-8°C and for 1 year at -20°C. Avoid repeated freeze-thaw cycles.

Quality control

- The absence of bacterial contamination (e.g. lipoproteins and endotoxins) has been confirmed using HEK-Blue™ TLR2 and HEK-Blue™ TLR4 cells.
- The biological activity has been validated using HEK-Blue™ TLR3 cells.

DESCRIPTION

Polyadenylic–polyuridylic acid (poly(A:U)) is a synthetic double stranded RNA molecule that signals only through TLR3. Recognition of poly(A:U) by TLR3 induces the activation of dendritic cells and T lymphocytes. When combined with an antigen in mice, poly(A:U) has been shown to promote antigen-specific Th1-immune responses and boost antibody production¹. The potent adjuvant activity of poly(A:U) has been exploited in the treatment of breast cancers that express TLR3².

1. Wang L. *et al.*, 2002. Noncoding RNA danger motifs bridge innate and adaptive immunity and are potent adjuvants for vaccination. *J Clin Invest* 110:1175–84. 2. Conforti R. *et al.*, 2010. Opposing effects of toll-like receptor (TLR3) signaling in tumors can be therapeutically uncoupled to optimize the anticancer efficacy of TLR3 ligands. *Cancer Res.* 70(2):490-500.

METHODS

Preparation of stock solution (1 mg/ml)

Stimulation of TLR3 can be achieved with 300 ng-100 µg/ml of Poly(A:U).

- Add 10 ml of the sterile physiological water (provided) to the poly(A:U) vial.
- Vortex until completely dissolved.

Note: You may increase the solubility by heating the mixture to 50°C for 10 minutes. Allow the solution to cool down to room temperature to ensure proper annealing.

TLR3 stimulation with Poly(A:U)

Poly(A:U) can be used to stimulate TLR3 in HEK-Blue™ TLR3 cells. These cells stably overexpress the TLR3 gene and an NF-κB-inducible secreted embryonic alkaline phosphatase (SEAP) reporter gene.

For more information visit <https://www.invivogen.com/hek-blue-trl3>.

- Prepare a HEK-Blue™ TLR3 cell suspension (280,000 cells/ml) in HEK-Blue Detection.
- In a 96-well plate, add 180 µl of the HEK-Blue™ hTLR3 cell suspension per well.
- Stimulate cells with 300 ng -100 µg/ml poly(A:U) for 6 to 24 hours.
- Incubate the plate at 37°C in 5% CO₂ for 6-16 h. SEAP can be observed with naked eye and determined using a spectrophotometer at 620-655 nm.

RELATED PRODUCTS

Product	Description	Cat.Code
HEK-Blue™ hTLR3	Human TLR3 reporter cells	hkb-htrl3
HEK-Blue™ hTLR3	Murine TLR3 reporter cells	hkb-mtrl3
HEK-Blue™ Detection	SEAP detection medium	hb-det1
HEK-Dual™ hTLR3	Double readout TLR3 cells	hkd-htrl3ni
Poly(I:C) HMW	TLR3 ligand	tlrl-pic
Poly(I:C) LMW	TLR3 ligand	tlrl-picw

TECHNICAL SUPPORT

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