Polyinosinic-polycytidylic acid . potassium salt (TLRGRADE®) (synthetic)

Activator of TLR3 and MDA5

TLR3 is a key effector of the immune response against viruses by recognizing double-stranded RNA. Polyinosinic-polycytidylic acid (Poly(I:C)), a synthetic double-stranded homopolymer, binds TLR3 and activates the transcription factor interferon regulator factor 3 (IRF3) following the initiation of TIR domain-containing adaptor protein (TRIF)-dependent TLR signaling. Activation of IRF3 by poly(I:C) leads to the production of type I interferons. Poly(I:C) also activates the RNA helicases MDA-5 and RIG-1. Poly(I:C) can be used to generate stable mature dendritic cells *in vitro* and is considered a potent adjuvant in vaccine formulations, especially those targeting dendritic cells, thanks to the synergy between MDA5 and TLR3 activation.

- Specific activator of TLR3 and MDA5
- Used to generate stable mature dendritic cells
- Potential adjuvant in cancer vaccines

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Ordering Information

Order Online »

ALX-746-021-M002	2mg
ALX-746-021-M005	5mg

Manuals, SDS & CofA

View Online »

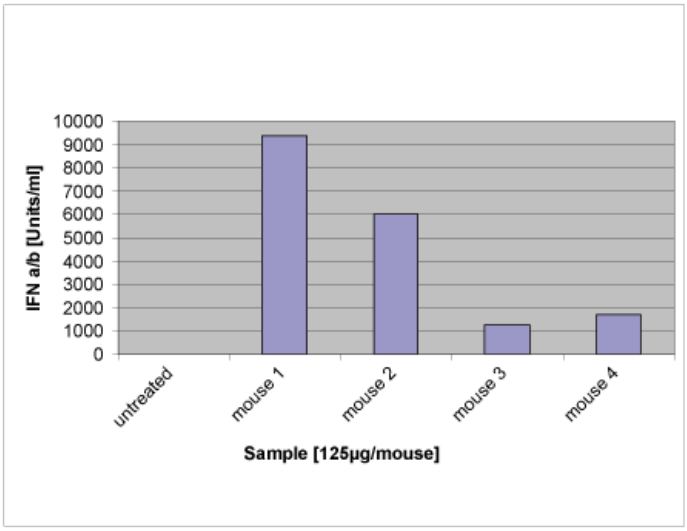


Figure 2: Poly(I:C) . K (TLRGRADE®) (synthetic) (Prod. No. ALX-746-021) induces cytokine release in mouse *in vivo*. **Method:** Poly(I:C) was injected i.v. and plasma levels of IFN α/β were determined 2 hours later by cytokine ELISA.

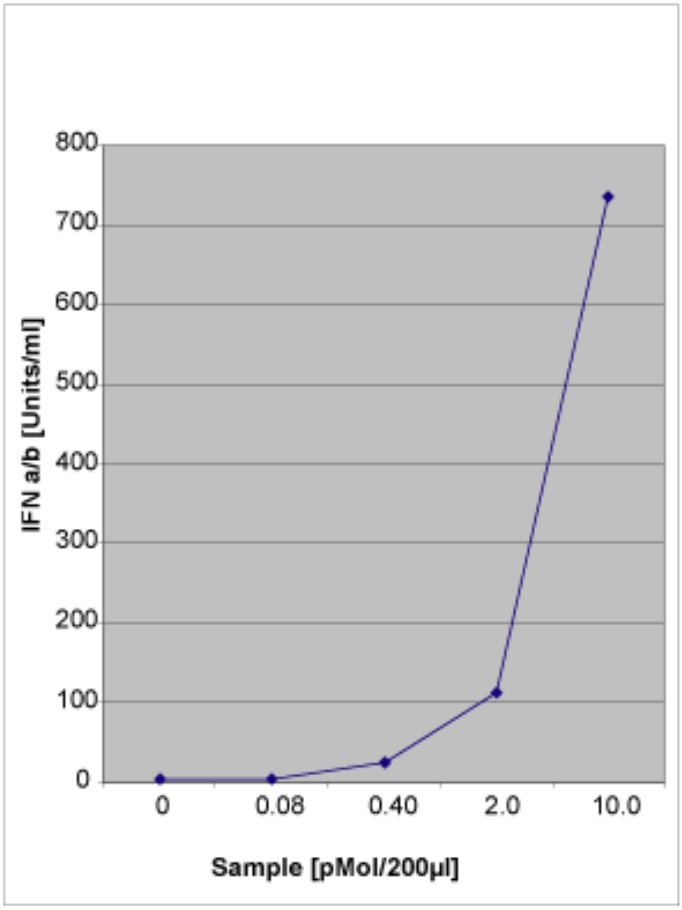


Figure 1: Poly(I:C) . K (TLRGRADE®) (synthetic) (Prod. No. ALX-746-021) induces cytokine release in murine BM-derived macrophages. **Method:** Poly(I:C) was added to bone marrow-derived murine macrophages in a 96-well plate at the indicated concentrations, cell supernatants were harvested after 24 hours and IFN α/β levels analyzed by cytokine ELISA.

Handling & Storage

Use/Stability	As indicated on product label or CoA when stored as recommended. Aqueous stock solution is stable for 1 day when stored at +4°C.
Handling	Protect from light. For maximum product recovery after thawing, centrifuge the vial before opening the cap. After reconstitution, prepare aliquots and store at -20°C.
Long Term Storage	+4°C
Shipping	Ambient Temperature

Regulatory Status

RUO - Research Use Only

Product Details

Alternative Name	poly(I:C) . K, poly(I:C)
CAS	31852-29-6
Couple Target	MDA, TLR, TLR3
Couple Type	Activator, Ligand
Formula	$(C_{10}H_{10}N_4NaO_7P)_x \bullet (C_9H_{11}N_3NaO_7P)_x$
Formulation	Lyophilized. Sterile.
Purity Detail	Activity and endotoxin tested – TLRGRADE®.
Quantity	Aliquoted by weight of dry material. Contains polymer, residual salt and water. Sufficient for at least 200 cellular activation assays at 10-25µg/ml.
Reconstitution	For a 1mg/ml stock solution, dissolve the total vial content in 2ml (ALX-746-021-M002) or 5ml (ALX-746-021-M005) endotoxin-free buffer or water. To obtain optimal dissolving we recommend the following procedure: – Add 50% of the solvent and let dissolve for 10 min. – Add remaining 50% of the solvent and mix thoroughly. – Moderate warming may aid dissolving.
Source	Synthetic.

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