Data Sheet (Cat.No.T74067)

TargetMol

Poly(I:C):Kanamycin (1:1) sodium

Chemical Properties

CAS No. :

Formula:

Molecular Weight:

Storage: Keep away from moisture
Powder: -20°C for 3 years | In solvent: -80°C for 1 year
Actual storage temperature shall be subject to the COA.

Biological Description

Description	Poly(I:C):Kanamycin (1:1) sodium is a complex.Poly(I:C) is a synthetic double-stranded RNA analogue and a TLR3 and RIG-I/MDA5 agonist that enhances immunity and promotes apoptosis in cancer cells.Kanamycin is an antimicrobial agent that is effective against both Gram-negative and positive bacteria which is able to bind the 70S ribosomal subunit.
Targets(IC50)	Apoptosis,Others,TLR
In vitro	In GL261 mouse glioma cells, Poly(I:C):Kanamycin (1:1) sodium (12.5-50μg/mL for 24h) induces dose-dependent cytotoxicity and significantly increases TNF-α and IFN-β expression, indicating proinflammatory and immune-stimulatory activity[1]. Poly(I:C):Kanamycin (1:1) (sodium) at a concentration of 10μg/mL induced significant cell death in HeLa cells after 48hours of treatment[2] At 5μg/mL for 24hours caused cytotoxicity and caspase-3 activation in B16-F10 melanoma cells[2].
In vivo	In C57BL/6 mice, intraperitoneal injection of Poly(I:C):Kanamycin (1:1) sodium (25μg/mouse), combined with GL261 cell inoculation, stimulates strong $CD8^+$ T cell responses in the tumor microenvironment and significantly suppresses tumor growth[1]. Intratumoral injection of Poly(I:C):Kanamycin (1:1) sodium (50μg/mouse, 3 times per week for 2weeks) significantly suppressed tumor growth in a B16-F10 melanoma xenograft model in C57BL/6 mice[2]. Intraperitoneal administration (50μg/mouse every 2days for 5 doses) prolonged survival in a CT26 colon cancer mouse model[2].

Solubility Information

Solubility	H2O: 40 mg/mL,Sonication is recommended. DMSO: < 1 mg/mL (insoluble) (< 1 mg/ml refers to the product slightly soluble or insoluble)

Reference

Robert Field, et al. Systemic challenge with the TLR3 agonist poly I:C induces amplified IFNalpha/beta and IL-1beta responses in the diseased brain and exacerbates chronic neurodegeneration. Brain Behav Immun. 2010 Aug;24(6):996-1007.
Cheng YS, Xu F. Anticancer function of polyinosinic-polycytidylic acid. Cancer Biol Ther. 2010 Dec 15;10(12):1219-23.

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