# **Product Datasheet**

# Polyinosinic-polycytidylic acid HMW NBP2-25288

Unit Size: 10 mg

Store at 4C short term. Aliquot and store at -20C long term. Avoid freeze-thaw cycles.

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# NBP2-25288

Polyinosinic-polycytidylic acid HMW

Product Information	
Unit Size	10 mg
Concentration	Please see the protocols for proper use of this product. If no protocol is available, contact technical services for assistance.
Storage	Store at 4C short term. Aliquot and store at -20C long term. Avoid freeze-thaw cycles.
Buffer	This is supplied in sterile low endotoxin water (<0.05 EU/ug) at 1 mg/ml
Product Description	
Description	Polyinosinic-polycytidylic acid (Poly(I:C)) is a synthetic analog of double stranded RNA (dsRNA) that is produced during the replicative life cycle of a majority of viruses. Poly(I:C) is known to induce type-1 interferon (IFN) through TLR3. Poly (I:C) directly binds to TLR3.
Species	Human, Mouse, Rat
Reactivity Notes	Human reactivity reported in scientific literature (PMID: 24693944) Mouse reactivity reported in scientific literature (PMID: 25647836). Rat reactivity reported in scientific literature (PMID: 26603372)
Notes	This is the HMW version of Polyinosinic-polycytidylic acid.
Product Application Details	
Applications	Functional, In vitro assay, In vivo assay, Ligand Activation
Recommended Dilutions	Functional, In vitro assay, In vivo assay, Ligand Activation
Application Notes	Used for activation of TLR3. Stimulation of TLR3 can be achieved with 10-100 ug/ml. Use in In vitro assay reported in scientific literature (PMID 24743304) .Use in Ligand activation, and functional reported in scientific literature (PMID 25957979). Use in In vivo assay reported in scientific literature (PMID 26196739). Use in Ligand Activation reported in scientific literature (PMID 26503951)

### Images

Polyinosinic-polycytidylic acid [NBP2-25288] - 293T cells were cotransfected with pCMV/TLR3 plasmid and pNF-kB/SEAP plasmid using Lipofectamin 2000 (Life Technology). After 48 hrs of transfection, 10 ug/ml of Poly(I:C) was added. Cells were incubated at 37C for 24 hrs. Transfected cell supernatant was collected and analyzed using the NFkB SEAPorter Assay kit







#### **Publications**

Sebasti ☐ o AI, Mateus D, Carrascal MA et al. CuMV VLPs Containing the RBM from SARS-CoV-2 Spike Protein Drive Dendritic Cell Activation and Th1 Polarization Pharmaceutics 2023-03-02 [PMID: 36986686] (ICC/IF)

Zhao D, Gao Y, Su Y et al. Oroxylin A regulates cGAS DNA hypermethylation induced by methionine metabolism to promote HSC senescence Pharmacological Research 2022-12-01 [PMID: 36464146] (In vitro)

Kanda T, Sasaki-Tanaka R, Masuzaki R et al. Knockdown of Mitogen-Activated Protein Kinase Kinase 3 Negatively Regulates Hepatitis A Virus Replication International journal of molecular sciences 2021-07-10 [PMID: 34299039] (In vitro)

Kubo T, Sato S, Hida T et al. IL-13 modulates delta Np63 levels causing altered expression of barrier- and inflammation-related molecules in human keratinocytes: A possible explanation for chronicity of atopic dermatitis Immunity, inflammation and disease 2021-04-01 [PMID: 33792188]

Sun S, Jiang N, Jiang Y et al. Chromatin remodeler Znhit1 preserves hematopoietic stem cell quiescence by determining the accessibility of distal enhancers Leukemia 2020-07-21 [PMID: 32694618] (Mouse)

Non-canonical Notch signaling drives activation and differentiation of peripheral CD4+ T cells. Dongre A, Surampudi L, Lawlor RG Front Immunol [PMID: 24611064] (Func, Mouse)

Effects of TLR Ligands on the Expression of Cytokines and Possible Role of NFkB in its Process in the Theca of Chicken Follicles Kang Y, Nii T, Isobe N J Poult Sci [PMID: 32055188] (Func, Chicken)

Jin M, Komine M, Tsuda H, et al. dsRNA induces IL-33 promoter activity through TLR3-EGFR-IRF3 pathway in normal human epidermal keratinocytes J. Dermatol. Sci. 2019-12-01 [PMID: 31810599] (Human)

Sun L, Hult EM, Cornell TT et al. Loss of myeloid-specific protein phosphatase 2A enhances lung injury and fibrosis and results in IL-10 dependent sensitization of epithelial cell apoptosis Am. J. Physiol. Lung Cell Mol. Physiol. 2019-03-06 [PMID: 30838865] (Func, Mouse)

Yabe-Wada T, Matsuba S, Takeda K et al. TLR signals posttranscriptionally regulate the cytokine trafficking mediator sortilin. Sci Rep. 2016-05-25 [PMID: 27220277] (In vitro, Func, Mouse, Human)

Jeong SY, Jeon R, Choi YK et al. Activation of microglial TLR3 promotes neuronal survival against cerebral ischemia. J. Neurochem. 2015-11-25 [PMID: 26603372] (In vitro, In Vivo, Rat)

Details:

Polyinosinic-polycytidylic acid (Poly-IC or Poly-ICLC) was used for in vivo experiments in Rats at 1 mg/kg dose - Poly IC injected intraperitoneally after ischemia, while the vehicle group was injected i.p. with 0.9% saline. Poly-IC was used for in vitro experiments also - microglia were treated with vehicle or 1-25 ug/ml of poly-IC.

Wongchana W, Lawlor RG, Osborne BA, Palaga T. Impact of Notch1 Deletion in Macrophages on Proinflammatory Cytokine Production and the Outcome of Experimental Autoimmune Encephalomyelitis. J. Immunol. 2015-10-26 [PMID: 26503951] (LA, In Vivo, Mouse)

Details:

Polyinosinic-polycytidylic acid (Poly I:C) was used at 12-15ug/kg body weight in experiments involving generation of Notch1 knockout (N1KO) and CSL/RBP-Jk KOmice from Notch1fl/fl × Mx1 cre+/? (N1KO), Notch1fl/fl × Mx1 cre?/? mice (control), Rbp-jkfl/fl × Mx1 cre+/? mice (CSL/RBP-Jk KO), and Rbp-jkfl/fl X Mx1 cre?/? mice (control).

More publications at <a href="http://www.novusbio.com/NBP2-25288">http://www.novusbio.com/NBP2-25288</a>

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