

# Mengo 3DPol (3B7): sc-65633

## BACKGROUND

The Mengovirus belongs to the genus *Cardiovirus* which is a member of the *Picornaviridae*. Mengovirus is a non-enveloped icosahedral virus that has a positive sense, single stranded RNA genome. The genome is divided into three parts: P1 (which encodes the virus capsid proteins), P2 and P3 (which both encode genes required for genome replication). Vertebrates are susceptible to infection by Mengovirus, though the illness caused by it is not severe enough to require vaccination. The Mengovirus suppresses the host's immune response by reducing the expression of NFκB. The amount of RNA polymerase (3DPol) of Mengovirus is commonly used to determine the extent of viral replication in mammals.

## REFERENCES

1. Altmeyer, R., Escriou, N., Girard, M., Palmenberg, A. and van der Werf, S. 1994. Attenuated Mengovirus as a vector for immunogenic human immunodeficiency virus type 1 glycoprotein 120. *Proc. Natl. Acad. Sci. USA* 91: 9775-9779.
2. Hall, D.J. and Palmenberg, A.C. 1997. Mengovirus 3C proteinase: recombinant expression, intergenus substrate cleavage and localization *in vivo*. *Virus Genes* 13: 99-110.
3. Duque, H. and Palmenberg, A.C. 1997. Epitope mapping of monoclonal antibodies raised to recombinant Mengo 3D polymerase. *Virus Genes* 13: 159-168.
4. Lund, G.A. and Scraba, D.G. 1980. The isolation of Mengovirus stable non-capsid polypeptides from infected L cells and preliminary characterization of an RNA polymerase activity associated with polypeptide E. *J. Gen. Virol.* 44: 391-403.
5. Frolov, V.G., Duque, H. and Palmenberg, A.C. 1999. Quantification of endogenous viral polymerase, 3D(Pol), in preparations of Mengo and encephalomyocarditis viruses. *Virology* 260: 148-155.
6. Martin, L.R., Neal, Z.C., McBride, M.S. and Palmenberg, A.C. 2000. Mengovirus and encephalomyocarditis virus poly(C) tract lengths can affect virus growth in murine cell culture. *J. Virol.* 74: 3074-3081.
7. Neal, Z.C., Harms, J.S., Hill, M.R. and Splitter, G.A. 2002. Encephalomyocarditis and Mengoviruses productively infect murine T-lymphocyte cell lines but not fresh *ex vivo* derived T lymphocytes. *Viral Immunol.* 15: 155-163.

## SOURCE

Mengo 3DPol (3B7) is a mouse monoclonal antibody raised against recombinant Mengovirus 3DPol.

## STORAGE

Store at 4° C, **\*\*DO NOT FREEZE\*\***. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) for detailed protocols and support products.

## PRODUCT

Each vial contains 200 µg IgG<sub>1</sub> in 1.0 ml PBS with < 0.1% sodium azide and 0.1% gelatin.

Mengo 3DPol (3B7) is available conjugated to agarose (sc-65633 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-65633 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-65633 PE), fluorescein (sc-65633 FITC), Alexa Fluor® 488 (sc-65633 AF488), Alexa Fluor® 546 (sc-65633 AF546), Alexa Fluor® 594 (sc-65633 AF594) or Alexa Fluor® 647 (sc-65633 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-65633 AF680) or Alexa Fluor® 790 (sc-65633 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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## APPLICATIONS

Mengo 3DPol (3B7) is recommended for detection of Mengo 3D Polymerase of viral origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000).

## SELECT PRODUCT CITATIONS

1. Shaheen, Z.R., Naatz, A. and Corbett, J.A. 2015. CCR5-dependent activation of mTORC1 regulates translation of inducible NO synthase and COX-2 during encephalomyocarditis virus infection. *J. Immunol.* 195: 4406-4414.
2. Perelygina, L., Plotkin, S., Russo, P., Hautala, T., Bonilla, F., Ochs, H.D., Joshi, A., Routes, J., Patel, K., Wehr, C., Icenogle, J. and Sullivan, K.E. 2016. Rubella persistence in epidermal keratinocytes and granuloma M2 macrophages in patients with primary immunodeficiencies. *J. Allergy Clin. Immunol.* 138: 1436-1439.
3. Sparrer, K.M.J., Gableske, S., Zurenski, M.A., Parker, Z.M., Full, F., Baumgart, G.J., Kato, J., Pacheco-Rodriguez, G., Liang, C., Pornillos, O., Moss, J., Vaughan, M. and Gack, M.U. 2017. TRIM23 mediates virus-induced autophagy via activation of TBK1. *Nat. Microbiol.* 2: 1543-1557.

## RESEARCH USE

For research use only, not for use in diagnostic procedures.