SANTA CRUZ BIOTECHNOLOGY, INC.

Influenza A pb1 (vC-19): sc-17602

BACKGROUND

Influenza viruses are divided into three types, designated A, B, and C. Influenza types A and B are responsible for epidemics of respiratory illness that occur almost every winter and are often associated with increased rates for hospitalization and death. Influenza type A viruses are divided into subtypes based on differences in two viral proteins called hemagglutinin (H) and neuraminidase (N). The influenza virus RNA polymerase consists of three virus-encoded proteins, pb1, pb2 and pa. pb1 is the subunit involved in the catalytic activity of nucleotide polymerization and is involved in the initiation of transcription. Both pb1 and pb2 can be crosslinked to synthetic RNA with the 3' terminal sequence of vRNA. These two subunits may also be involved in recognition of the promoter and/or replication origin on template vRNA. pb2 is the cap 1-recognition protein, which binds to the cap structure of host cell RNA, otherwise know as "cap snatching". The cap structure then acts as a primer for transcription to produce viral mRNA.

REFERENCES

1. Mitnaul, L.J., et al. 2000. Balanced hemagglutinin and neuraminidase activities are critical for efficient replication of Influenza A virus. J. Virol. 13: 6015-6020.
2. Fleming, D.M. and Zambon, M. 2001. Update on influenza and other viral pneumonias. Curr. Opin. Infect. Dis. 2: 199-204.
3. Bullido, R., et al. 2001. Influenza A virus NEP (ns2 protein) downregulates RNA synthesis of model template RNAs. J. Virol. 10: 4912-4917.
4. Abe, T., et al. 2001. Antisense therapy of influenza. Eur. J. Pharm. Sci. 1: 61-69.
5. Li, M.L., et al. 2001. The active sites of the influenza cap-dependent endonuclease are on different polymerase subunits. EMBO J. 8: 2078-2086.

SOURCE

Influenza A pb1 (vC-19) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of pb1 of Influenza A virus origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-17602 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

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 or our catalog for detailed protocols and support products.

APPLICATIONS

Influenza A pb1 (vC-19) is recommended for detection of pb1 of Influenza A virus origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000).

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048.

SELECT PRODUCT CITATIONS

1. Li, G., et al. 2011. Heat shock protein 70 inhibits the activity of Influenza A virus ribonucleoprotein and blocks the replication of virus *in vitro* and *in vivo*. PLoS ONE 6: e16546.
2. Le Goffic, R., et al. 2011. Transcriptomic analysis of host immune and cell death responses associated with the influenza A virus PB1-F2 protein. PLoS Pathog. 7: e1002202.
3. Leymarie, O., et al. 2013. Kinetic characterization of PB1-F2-mediated immunopathology during highly pathogenic avian H5N1 influenza virus infection. PLoS ONE 8: 1-15.

RESEARCH USE

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