

# EBV viral capsid antigen (1H1): sc-51944

## BACKGROUND

Epstein-Barr virus (EBV), also designated human herpesvirus 4 (HHV-4), is a member of the herpesvirus family and is one of the most common human viruses, infecting about 90% of the population. EBV infects only B lymphocytes and, though often asymptomatic, it can cause infectious mononucleosis, a disease characterized by fatigue, fever, sore throat and muscle soreness. The linear genome of EBV circularizes once it enters the cell and exists there as an episome. EBV may play a role in the development of both Burkitt lymphoma, a disease in which a tumor can form on the mandible or maxilla, and nasopharyngeal carcinoma, a tumor found in the upper respiratory tract, most commonly in the nasopharynx. The viral capsid antigen (VCA) of EBV is used as a marker for screening for viral infection as well as nasopharyngeal carcinoma, and many antigens from the viral capsid are used in diagnostic tests.

## REFERENCES

1. Luka, J., et al. 1986. Characterization of the restricted component of Epstein-Barr virus early antigens as a cytoplasmic filamentous protein. *J. Virol.* 58: 748-756.
2. Goldschmidts, W.L., et al. 1989. Neutralization of Epstein-Barr virus-induced ribonucleotide reductase with antibody to the major restricted early antigen polypeptide. *Virology* 170: 330-333.
3. Fan, J.A. 1990. Expression of the Epstein-Barr virus P150 viral capsid antigen in *Escherichia coli* for the use as antigen in diagnostic tests. *Zhongguo Yi Xue Ke Xue Yuan Xue Bao* 11: 381-387.
4. Gorgievski-Hrisoho, M., et al. 1990. Serodiagnosis of infectious mononucleosis by using recombinant Epstein-Barr virus antigens and enzyme-linked immunosorbent assay technology. *J. Clinical Microbiol.* 28: 2305-2311.
5. Ruf, I.K., et al. 1999. Epstein-Barr virus regulates c-Myc, apoptosis, and tumorigenicity in Burkitt lymphoma. *Mol. Cell. Biol.* 19: 1651-1660.
6. Tranchand-Bunel, D., et al. 1999. Detection of human antibodies using "convergent" combinatorial peptide libraries or "mixotopes" designed from a nonvariable antigen: application to the EBV viral capsid antigen p18. *J. Pept. Res.* 52: 495-508.
7. Gan, Y.Y., et al. 2001. Epstein-Barr viral antigens used in the diagnosis of nasopharyngeal carcinoma. *J. Biomed. Sci.* 3: 159-169.
8. Kantakamalakul, W., et al. 2001. Specific IgA antibody to Epstein-Barr viral capsid antigen: a better marker for screening nasopharyngeal carcinoma than EBV-DNA detection by polymerase chain reaction. *Asian Pac. J. Allergy Immunol.* 18: 221-226.
9. Spender, L.C., et al. 2006. Cell target genes of Epstein-Barr virus transcription factor EBNA-2: induction of the p53 $\alpha$  regulatory subunit of PI 3-kinase and its role in survival of EREB2.5 cells. *J. Gen. Virol.* 87 (Pt. 10): 2859-2867.

## SOURCE

EBV viral capsid antigen (1H1) is a mouse monoclonal antibody raised against purified Epstein Barr virus.

## PRODUCT

Each vial contains 100  $\mu$ g IgG<sub>1</sub> in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

## APPLICATIONS

EBV viral capsid antigen (1H1) is recommended for detection of p120 and p160 capsid antigens of EBV origin by immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500).

Molecular Weight of EBV viral capsid antigens: 120/160 kDa.

## STORAGE

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

## RESEARCH USE

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

## PROTOCOLS

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