

EBV gp340/gp220 Envelope (022): sc-57723

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. gp340 and gp220 are EBV envelope glycoproteins encoded by the same gene. The gp340/gp220 gene product has been a strong candidate for a vaccine antigen against the virus. gp340/gp220 is expressed on the membrane, making it easy for the immune system to recognize.

REFERENCES

1. Luka, J., Miller, G., Jörnvall, H. and Pearson, G.R. 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., Ginsburg, M. and Pearson, G.R. 1989. Neutralization of Epstein-Barr virus-induced ribonucleotide reductase with antibody to the major restricted early antigen polypeptide. *Virology* 170: 330-333.
3. Gorgievski-Hrisoho, M., Hinderer, W., Nebel-Schickel, H., Horn, J., Vornhagen, R., Sonneborn, H.H., Wolf, H. and Siegl, G. 1990. Serodiagnosis of infectious mononucleosis by using recombinant Epstein-Barr virus antigens and enzyme-linked immunosorbent assay technology. *J. Clin. Microbiol.* 28: 2305-2311
4. Wallace, L.E., Wright, J., Ulaeto, D.O., Morgan, A.J. and Rickinson, A.B. 1991. Identification of two T cell epitopes on the candidate Epstein-Barr virus vaccine glycoprotein gp340 recognized by CD4⁺ T cell clones. *J. Virol.* 65: 3821-3828.
5. Ragot, T., Finerty, S., Watkins, P.E., Perricaudet, M. and Morgan, A.J. 1993. Replication-defective recombinant adenovirus expressing the Epstein-Barr virus (EBV) envelope glycoprotein gp340/220 induces protective immunity against EBV-induced lymphomas in the cottontop tamarin. *J. Gen. Virol.* 74: 501-507.
6. Ruf, I.K., Rhyne, P.W., Yang, H., Borza, C.M., Hutt-Fletcher, L.M., Cleveland, J.L. and Sample, J.T. 1999. Epstein-Barr virus regulates c-Myc, apoptosis, and tumorigenicity in Burkitt lymphoma. *Mol. Cell. Biol.* 19: 1651-1660.
7. Wilson, A.D., Lövgren-Bengtsson, K., Villacres-Ericsson, M., Morein, B. and Morgan, A.J. 1999. The major Epstein-Barr virus (EBV) envelope glycoprotein gp340 when incorporated into ISCOMs primes cytotoxic T cell responses directed against EBV lymphoblastoid cell lines. *Vaccine* 17: 1282-1290.

SOURCE

EBV gp340/gp220 Envelope (022) is a mouse monoclonal antibody raised against native EBV from infected B cell lysate.

PRODUCT

Each vial contains 100 µg IgG₁ in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

EBV gp340/gp220 Envelope (022) is recommended for detection of EBV gp340/gp220 Envelope of Epstein-Barr Virus origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000) and immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500).

Molecular Weight of EBV gp340/gp220 Envelope: 94 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 or our catalog for detailed protocols and support products.