



EBV Ea-D (8.F.92): sc-57722

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. EBV infects B cells and, though often asymptomatic, it can cause infectious mononucleosis, a disease characterized by fatigue, fever, sore throat and muscle soreness. The EBV-induced early antigens (Ea) are among several antigen complexes that have been identified in EBV-infected cells. The Ea complex is composed of diffuse (Ea-D) and restricted (Ea-R) components. The activity of Ea-D is suppressed during latent infection. BMRF1, the gene that encodes for Ea-D, is closely associated with the gene encoding for EBV DNA polymerase, and Ea-D is essential for the activity of this polymerase. Ea-D forms a complex with EBV DNase and, together, they may play a role in viral replication.

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. Holley-Guthrie, E.A., Quinlivan, E.B., Mar, E.C. and Kenney, S. 1990. The Epstein-Barr virus (EBV) BMRF1 promoter for early antigen (EA-D) is regulated by the EBV transactivators, BRLF1 and BZLF1, in a cell-specific manner. *J. Virol.* 64: 3753-9.
5. Daibata, M. and Sairenji, T. 1993. Epstein-Barr virus (EBV) replication and expressions of EA-D (BMRF1 gene product), virus-specific deoxyribonuclease, and DNA polymerase in EBV-activated Akata cells. *Virology* 196: 900-904.
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. Gan, Y.Y., Fones-Tan, A., Chan, S.H. and Gan, L.H. 2001. Epstein-Barr viral antigens used in the diagnosis of nasopharyngeal carcinoma. *J. Biomed. Sci.* 3: 159-169.
8. Spender, L.C., Lucchesi, W., Bodelon, G., Bilancio, A., Karstegl, C.E., Asano, T., Dittrich-Breiholz, O., Kracht, M., Vanhaesebroeck, B. and Farrell, P.J. 2006. Cell target genes of Epstein-Barr virus transcription factor EBNA-2: induction of the p55 α regulatory subunit of PI3-kinase and its role in survival of EREB2.5 cells. *J. Gen. Virol.* 87: 2859-2867.

SOURCE

EBV Ea-D (8.F.92) is a mouse monoclonal antibody raised against EBV Ea-D.

PRODUCT

Each vial contains 100 μ g IgG₂ in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

EBV Ea-D (8.F.92) is recommended for detection of Early Diffuse Protein (Ea-D) p52/50 of Epstein-Barr Virus origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g of total protein (1 ml of cell lysate)] and immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500).

Molecular Weight of EBV Ea-D: 43 kDa.

Molecular Weight of EBV Ea-D p52/p50: 52/50 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 for detailed protocols and support products.