SANTA CRUZ BIOTECHNOLOGY, INC.

EBV gp110 Envelope Protein (5B2): sc-56980

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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. Glycoprotein 110 (gp110) is an envelope protein expressed in the late replicative cycle of EBV. gp110 is required for assembly and egress of EBV and is found primarily in the endoplasmic reticulum. The C-terminal tail domain of gp110 is essential for its function and may provide signals that lead to the assembly and release of EBV.

REFERENCES

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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. Gan, Y.Y., Fones-Tan, A., Chan, S.H. and Gan, L.H. 1996. Epstein-Barr viral antigens used in the diagnosis of nasopharyngeal carcinoma. J. Biomed. Sci. 3: 159-169.
5. 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.
6. Lee, S.K. 1999. Four consecutive arginine residues at positions 836-839 of EBV gp110 determine intracellular localization of gp110. Virology 264: 350-358.
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8. Park, S.J., Lee, S.K. and Lee, B.J. 2002. Effect of tandem rare codon substitution and vector-host combinations on the expression of the EBV gp110 C-terminal domain in *Escherichia coli.* Protein Expr. Purif. 24: 470-480.

SOURCE

EBV gp110 Envelope Protein (5B2) is a mouse monoclonal antibody raised against Epstein-Barr virus.

PRODUCT

Each vial contains 100 µg IgG_1 in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

EBV gp110 Envelope Protein (5B2) is recommended for detection of EBV gp110 Envelope Protein of Epstein-Barr virus origin by immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500).

Molecular Weight of EBV gp110 Envelope Protein: 110 kDa.

SELECT PRODUCT CITATIONS

1. Hoji, A., Xu, S., Bilben, H. Rowe, D.T. 2018. Calcium mobilization is responsible for thapsigargin induced Epstein Barr virus lytic reactivation in *in vitro* immortalized lymphoblstoid cell lines. Heliyon 4: e00917.
2. Lee, J., Kosowicz, J.G., Hayward, S.D., Desai, P., Stone, J., Lee, J.M., Liu, J.O. and Ambinder, R.F. 2019. Pharmacologic activation of lytic Epstein-Barr virus gene expression without virion production. J. Virol. 93: e00998-19.
3. Chen, H., Zhang, X., Zhang, S., Duan, X., Xiang, T., Zhou, X., Zhang, W., Zhang, X., Feng, Q., Kang, Y., Li, J., Deng, L., Wang, L., Lv, X., Zeng, M., Zeng, Y.X. and Xu, M. 2021. T cell epitope screening of Epstein-Barr virus fusion protein gB. J. Virol. 95: e00081-21.

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.