

EBV Bcl-2 (5E270): sc-71022

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 B cells and, though often asymptomatic, it can cause infectious mononucleosis, a disease characterized by fatigue, fever, sore throat and muscle soreness. Bcl-2 is an anti-apoptotic cell cycle regulator that is highly expressed in EBV-positive lymphomas and may be associated with oncogenesis. During the early lytic cycle of EBV infection, the virus expresses the BHRF1 gene which encodes for a homologous viral Bcl-2 protein. This transmembrane protein may act to prevent apoptosis during EBV infection, thereby maximizing virus particle production and facilitating the establishment of virus persistence.

REFERENCES

1. Jiwa, N.M., et al. 1995. Expression of Bcl-2 protein and transcription of the Epstein-Barr virus Bcl-2 homologue BHRF-1 in Hodgkin's disease: implications for different pathogenic mechanisms. *Histopathology* 26: 547-553.
2. Khanim, F., et al. 1997. BHRF-1, a viral homologue of the Bcl-2 oncogene, is conserved at both the sequence and functional level in different Epstein-Barr virus isolates. *J. Gen. Virol.* 78: 2987-2999.
3. McCarthy, N.J., et al. 1997. The Epstein-Barr virus gene BHRF-1, a homologue of the cellular oncogene Bcl-2, inhibits apoptosis induced by γ radiation and chemotherapeutic drugs. *Adv. Exp. Med. Biol.* 406: 83-97.
4. Chang, M.S., et al. 2005. Cell-cycle regulators, Bcl-2 and NF κ B in Epstein-Barr virus-positive gastric carcinomas. *Int. J. Oncol.* 27: 1265-1272.
5. Howell, M., et al. 2005. Herpesvirus pan encodes a functional homologue of BHRF-1, the Epstein-Barr virus v-Bcl-2. *BMC Microbiol.* 5: 6.
6. Tomlin, J.L., et al. 2005. Bcl-2 and c-Myc cooperate in the Epstein-Barr virus-immortalized human B cell line GM607 but do not confer tumorigenicity. *Leuk. Lymphoma* 46: 581-592.
7. Guo, L., et al. 2006. Expression of Etk/Bmx tyrosine kinase in the tumorigenicity of nasopharyngeal epithelium and its relation with EB virus infection and the apoptosis-related protein Bcl-2. *Cancer Lett.* 232: 255-261.
8. Lacy, J., et al. 2006. Systemic Bcl-2 antisense oligodeoxynucleotide in combination with cisplatin cures EBV⁺ nasopharyngeal carcinoma xenografts in SCID mice. *Int. J. Cancer* 119: 309-316.
9. Li, L.Y., et al. 2006. Human cellular protein VRK2 interacts specifically with Epstein-Barr virus BHRF1, a homologue of Bcl-2, and enhances cell survival. *J. Gen. Virol.* 87: 2869-2878.

SOURCE

EBV Bcl-2 (5E270) is a mouse monoclonal antibody raised against Epstein-Barr virus.

PRODUCT

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

APPLICATIONS

EBV Bcl-2 (5E270) is recommended for detection of the early antigen homologue Bcl-2 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 Bcl-2: 22 kDa.

SELECT PRODUCT CITATIONS

1. Bai, J., et al. 2021. SS-31 protect retinal pigment epithelial cells from H₂O₂-induced cell injury by reducing apoptosis. *Clin. Exp. Pharmacol. Physiol.* 48: 1016-1023.

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.