SANTA CRUZ BIOTECHNOLOGY, INC.

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

SANTA CRUZ BIOTECHNOLOGY

*The Power to Question*

## 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 homologus 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 NFκB 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 µg $IgG_1$ 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 µg per 100-500 µg 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 $H_2O_2$ -induced cell injury by reducing apoptosis. Clin. Exp. Pharmacol. Physiol. 48: 1016-1023.
2. Bai, J., et al. 2022. Ghrelin mitigates high-glucose-induced oxidative damage and apoptosis in lens epithelial cells. J. Diabetes Res. 2022: 1373533.


## 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.