

EBV ZEBRA (vE-20): sc-17503

BACKGROUND

Epstein-Barr virus, frequently referred to as EBV, is a member of the herpesvirus family and one of the most common human viruses. The EBV latent membrane protein 1, otherwise known as LMP1, plays a central role in the transformation process. LMP1 mimics activated receptors of the tumor necrosis factor receptor superfamily to promote cell growth and antiapoptotic mechanisms. LMP1 and other EBV latent proteins upregulate cytokines and growth factors which participate in autocrine and paracrine loops that are likely to promote cell transformation and modulate immune responses. In addition, the crucial Epstein-Barr virus (EBV) gene, ZEBRA, acts as a switch between latency and replication of this herpesvirus. During latency of EBV, ZEBRA expression is repressed. Inducing stimuli cause synthesis of ZEBRA which, in turn, activates expression of several individual EBV early genes. The ZEBRA polypeptide is a site-specific DNA binding protein that is likely to function as a transcriptional transactivator.

REFERENCES

1. Young, L.S., et al. 1988. Epstein-Barr virus gene expression in nasopharyngeal carcinoma. *J. Gen. Virol.* 5: 1051-1065.
2. Miller, G. 1990. The switch between latency and replication of Epstein-Barr virus. *J. Infect. Dis.* 5: 833-844.
3. Fahmi, H., et al. 2000. Transforming growth factor β 1 stimulates expression of the Epstein-Barr virus BZLF1 immediate-early gene product ZEBRA by an indirect mechanism which requires the MAPK kinase pathway. *J. Virol.* 13: 5810-5818.
4. Mosialos, G. 2001. Cytokine signaling and Epstein-Barr virus-mediated cell transformation. *Cytokine Growth Factor Rev.* 12: 259-270.
5. Hahn, P., et al. 2001. The LMP1 gene isolated from Russian nasopharyngeal carcinoma has no 30 bp deletion. *Int. J. Cancer* 6: 815-821.

SOURCE

EBV ZEBRA (vE-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of ZEBRA of EBV origin.

PRODUCT

Each vial contains 200 μ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-17503 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.

APPLICATIONS

EBV ZEBRA (vE-20) is recommended for detection of ZEBRA of EBV origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000).

Molecular Weight of EBV ZEBRA: 38 kDa.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048.

SELECT PRODUCT CITATIONS

1. Dickerson, S.J., et al. 2009. Methylation-dependent binding of the Epstein-Barr virus BZLF1 protein to viral promoters. *PLoS Pathog.* 5: e1000356.
2. Flower, K., et al. 2011. Epigenetic control of viral life-cycle by a DNA-methylation dependent transcription factor. *PLoS ONE* 6: e25922.
3. Ramasubramanian, S., et al. 2012. Dynamic chromatin environment of key lytic cycle regulatory regions of the Epstein-Barr virus genome. *J. Virol.* 86: 1809-1819.
4. Ramasubramanian, S., et al. 2012. Genome-wide analyses of Zta binding to the Epstein-Barr virus genome reveals interactions in both early and late lytic cycles and an epigenetic switch leading to an altered binding profile. *J. Virol.* 86: 12494-12502.

RESEARCH USE

For research use only, not for use in diagnostic procedures.


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Try **EBV ZEBRA (BZ1): sc-53904**, our highly recommended monoclonal alternative to EBV ZEBRA (vE-20). Also, for AC, HRP, FITC, PE, Alexa Fluor® 488 and Alexa Fluor® 647 conjugates, see **EBV ZEBRA (BZ1): sc-53904**.