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Monoclonal Antibody to Epstein Barr Virus / EBV Capsid Antigen (VCA gp160) - Purified

Alternate names: HHV-4, HHV4

Catalog No.: BM1087

Quantity: 0.2 mg

Concentration: 1.0 mg/ml

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. The viral capsid antigen (VCA) of EBV is used as a marker for screening for viral infection as well as nasopharyngeal carcinoma, and many antigens from the viral capsid are used in diagnostic tests.

Host / Isotype: Mouse / IgG2a

Recommended Isotype Controls: AM03096PU-N

Clone: 2E3

Immunogen: EBV wild type

Format:
State: Liquid purified IgG fraction
Purification: Affinity Chromatography on Protein A
Buffer System: PBS
Preservatives: 0.09% Sodium Azide

Applications:
ELISA.
Western Blot (1/100-1/1000).
Immunofluorescence: (1/50-1/500).
Other applications not tested. Optimal dilutions are dependent on conditions and should be determined by the user.

Molecular Weight: 110 kDa (VCA glycoprotein), 150 kDa (non-glycosylated VCA major capsid antigen)

Specificity: This antibody recognises a 160 kDa VCA antigen in immunoblotting.
Does **not** react with CMV, ADV, VSZ, HSV or other EBV antigens.

Storage:

Store undiluted at 2-8°C for one month or (in aliquots) at -20°C for longer.
Avoid repeated freezing and thawing.
Shelf life: one year from despatch.

Product Citations:

Originator or purchased from resellers:

1. Feng X, Zhang J, Chen WN, Ching CB. Proteome profiling of Epstein-Barr virus infected nasopharyngeal carcinoma cell line: identification of potential biomarkers by comparative iTRAQ-coupled 2D LC/MS-MS analysis. J Proteomics. 2011 Apr 1;74(4):567-76. doi: 10.1016/j.jprot.2011.01.017. Epub 2011 Feb 4. PubMed PMID: 21296196.

General Readings:

1. Luka J, Miller G, Jörnvall H, Pearson GR. Characterization of the restricted component of Epstein-Barr virus early antigens as a cytoplasmic filamentous protein. J Virol. 1986 Jun;58(3):748-56. PubMed PMID: 2422401.
2. Goldschmidts WL, Ginsburg M, Pearson GR. Neutralization of Epstein-Barr virus-induced ribonucleotide reductase with antibody to the major restricted early antigen polypeptide. Virology. 1989 May;170(1):330-3. PubMed PMID: 2541553.
3. Fan, J.A. 1990. Expression of the Epstein-Barr virus p150 viral capsid antigen in Escherichia coli for the use as antigen in diagnostic tests. Zhongguo Yi Xue Ke Xue Yuan Xue Bao 11: 381-387.
4. Gorgievski-Hrisoho M, Hinderer W, Nebel-Schickel H, Horn J, Vornhagen R, Sonneborn HH, et al. Serodiagnosis of infectious mononucleosis by using recombinant Epstein-Barr virus antigens and enzyme-linked immunosorbent assay technology. J Clin Microbiol. 1990 Oct;28(10):2305-11. PubMed PMID: 2172287.
5. Ruf IK, Rhyne PW, Yang H, Borza CM, Hutt-Fletcher LM, Cleveland JL, et al. Epstein-barr virus regulates c-MYC, apoptosis, and tumorigenicity in Burkitt lymphoma. Mol Cell Biol. 1999 Mar;19(3):1651-60. PubMed PMID: 10022853.
6. Tranchand-Bunel, D., et al. 1999. Detection of human antibodies using “convergent” combinatorial peptide libraries or “mixotopes” designed from a nonvariable antigen: application to the EBV viral capsid antigen p18. J. Pept. Res. 52: 495-508.
7. Gan, Y.Y., et al. 2001. Epstein-Barr viral antigens used in the diagnosis of nasopharyngeal carcinoma. J. Biomed. Sci. 3: 159-169.
8. Kantakamalakul, W., et al. 2001. Specific IgA antibody to Epstein-Barr viral capsid antigen: a better marker for screening nasopharyngeal carcinoma than EBV-DNA detection by polymerase chain reaction. Asian Pac. J. Allergy Immunol. 18: 221-226.
9. Spender LC, Lucchesi W, Bodelon G, Bilancio A, Karstegl CE, Asano T, et al. Cell target genes of Epstein-Barr virus transcription factor EBNA-2: induction of the p55alpha regulatory subunit of PI3-kinase and its role in survival of EREB2.5 cells. J Gen Virol. 2006 Oct;87(Pt 10):2859-67. PubMed PMID: 16963743.