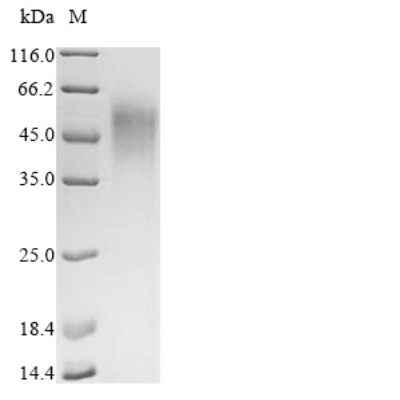
Recombinant Epstein-Barr virus Epstein-Barr nuclear antigen 2 (EBNA2), partial

Product Code	CSB-YP718162EEZ(A4)
Relevance	Plays a key role in the activation of the host resting B-cell and stimulation of B-cell proliferation. Acts by up-regulating the expression of viral EBNA1-6, LMP1, LMP2A and LMP2B genes, as well as several host genes including CD21, CD23 and MYC. Activates transcription by acting as an adapter molecule that binds to cellular sequence-specific DNA-binding proteins such as host CBF1, SMARCB1 and SPI1. Once EBNA2 is near promoter sites, its acidic activating domain recruits basal and activation-associated transcription factors TFIIB, TAF40, TFIIH components ERCC2 and ERCC3, and CBP in order to promote transcription. Alternatively, EBNA2 can affect activities of cell cycle regulators and retard cell cycle progression at G2/M phase. It also induces chromosomal instability, by disrupting mitotic checkpoints, multi-nucleation and formation of micronuclei in infected cells (By similarity).
Abbreviation	Recombinant Epstein-Barr virus EBNA2 protein, partial
Storage	The shelf life is related to many factors, storage state, buffer ingredients, storage temperature and the stability of the protein itself. Generally, the shelf life of liquid form is 6 months at -20°C/-80°C. The shelf life of lyophilized form is 12 months at -20°C/-80°C.
Uniprot No.	Q69022
Product Type	Recombinant Proteins
Immunogen Species	Epstein-Barr virus (strain AG876) (HHV-4) (Human herpesvirus 4)
Purity	Greater than 90% as determined by SDS-PAGE.
Sequence	SYSIPSMTLSPEPLPPPAAPAHPLPGVIYDQQALPPTPGPPWWPPVRDPTPTT QTPPTNTKQGPDQGQGRGRWRGRGRSKGRGRMHKLPEPRRPGPDTSSPS MPQLSPVVSLHQGQGPENSPTPGPSTAGPVCRVTPSATPDISPIHEPESSDSE EPPFLFPSDWYPPTLEPAELDESWEGIFETTESHSSDEENVGGPSKRPRTSTQ
Source	Yeast
Target Names	EBNA2
Expression Region	247-454aa
Notes	Repeated freezing and thawing is not recommended. Store working aliquots at 4°C for up to one week.
Tag Info	N-terminal 6xHis-tagged and C-terminal Myc-tagged
Mol. Weight	25.9kDa
Protein Length	Partial
Image	



(Tris-Glycine gel) Discontinuous SDS-PAGE (reduced) with 5% enrichment gel and 15% separation gel.

Description

The expression region of this recombinant Epstein-Barr virus EBNA2 covers amino acids 247-454. The expected molecular weight for the EBNA2 protein is calculated to be 25.9 kDa. This EBNA2 recombinant protein is manufactured in yeast. The EBNA2 gene fragment has been modified by fusing the N-terminal 6xHis tag and C-terminal Myc tag, providing convenience in detecting and purifying the recombinant EBNA2 protein during the following stages.

Epstein-Barr virus Epstein-Barr nuclear antigen 2 (EBNA2) is a transcriptional activator that plays a crucial role in initiating and maintaining the viral latent infection. It regulates the expression of both viral and cellular genes, promoting the survival and proliferation of infected B cells. EBNA2 interacts with host cell transcription factors, including the cellular DNA-binding protein RBP-Jκ, leading to the activation of viral latent genes, thus contributing to the establishment of latent infection. EBNA2 is essential for the transformation of primary B cells into immortalized lymphoblastoid cell lines (LCLs). This process is a hallmark of EBV-associated B-cell malignancies. EBNA2 can modulate various cellular signaling pathways, including the Notch signaling pathway, to create a favorable environment for viral persistence and cell survival. EBNA2's role in cellular transformation is linked to the development of EBV-associated cancers, such as Burkitt's lymphoma, Hodgkin's lymphoma, and nasopharyngeal carcinoma.

Shelf Life

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