Hepatitis B Virus Protein X Hepatitis B virus E. coli Tag free

Product Data Sheet

Type: Recombinant
Tag: Tagless
Source: E. coli
Species: Hepatitis B virus
Other names: HBx

Cat. No.:

RD972038025	(0.025 mg)
RD972038100	(0.1 mg)

Description

Total 154 AA. MW: 17 kDa (calculated). UniProtKB acc.no. P12936. 153 AA of recombinant HBx protein and one extra AA, N-terminal methionin (highlighted).

Introduction to the Molecule

Hepatitis B virus X protein (HBx) is a 17 kD transcriptional coactivator that plays a significant role in the regulation of genes involved in inflammation and cell survival. It regulates many transcription factors including nuclear factor kappa B (NF-kappaB) and plays a key role in hepatocarcinogenesis. HBx facilitates the binding of cAMP response element binding protein (CREB) to its responsive element. HBx stabilizes the cellular coactivator ASC-2 through direct protein-protein interaction, affecting the regulation of genes actively transcribed in liver cancer cells.

HBx transactivates both JNK and MAPK signal transduction pathways in association with the mobilization of cytosolic Ca^{2+}. The communication between HBx and general transcription factor TFIIB is also one of the mechanisms which account for its transcriptional transactivation.

HBx decreased the expression of PTEN a known tumor suppressor and a negative regulator of phosphatidylinositol 3'-kinase/AKT and HBx decreased the expression of PTEN in HBx-transfected cells.

The etiology of hepatocellular carcinoma (HCC) is involved with hepatitis B virus (HBV) infection and HBx in particular plays a role in the development of HBV-related HCC. The persistence of HBx is important to the pathogenesis of early HCC and HBx expression in the liver during chronic HBV infection may be an important prognostic marker for the development of HCC.

Research topic

Others

Amino Acid Sequence

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MAARVCCQLD PARDVLCLRP VGAESRGRPV SGPFGTLPSP SSSAVPADHG AHLSLRGLPV CAFSSAGPCA LRFTSARRME
TTVNAHQVLP KVLHKRTLGL SAMSTTDLEA YFKDCLFKDW EELGEEIRLK VFVLGGCRHK LVCSPAPCNF FTSA
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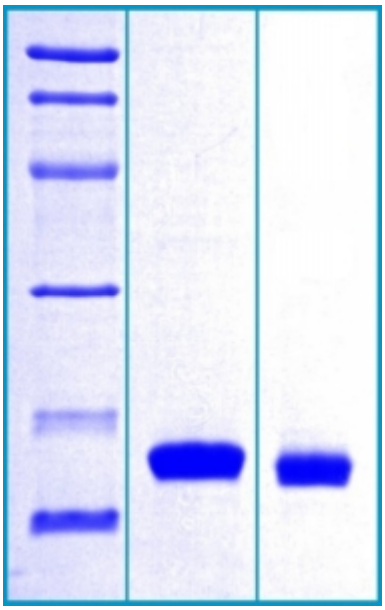
Source

E. coli

Purity

Purity as determined by densitometric image analysis: >95%

SDS-PAGE gel



14% SDS-PAGE separation of HBx
1. M.W. marker - 14, 21, 31, 45, 66, 97 kDa
2. reduced and heated sample, 5µg/lane
3. non-reduced and non-heated sample, 2.5µg/lane

Endotoxin

<1.0 EU/µg

Formulation

Filtered (0.4 µm) and lyophilized from 0.5 mg/mL solution in 30 mM acetate buffer, pH 4.

Reconstitution

Add 0.1 M acetate buffer pH 4.0 to prepare a working stock solution of 0.5 mg/mL and let the lyophilized pellet dissolve completely. For conversion into higher pH value, we recommend intensive dilution by relevant buffer to a concentration of 10 µg/mL. In higher concentrations the solubility of this antigen is limited. Filter sterilize your culture media/working solutions containing this non-sterile product before using in cell culture.

Shipping

At ambient temperature. Upon receipt, store the product at the temperature recommended below.

Storage, Stability/Shelf Life

Store the lyophilized protein at -80 °C. Lyophilized protein remains stable until the expiry date when stored at -80 °C. Aliquot reconstituted protein to avoid repeated freezing/thawing cycles and store at -80 °C for long term storage. Reconstituted protein can be stored at 4 °C for a week.

Quality Control Test

BCA to determine quantity of the protein.
SDS PAGE to determine purity of the protein.
LAL TEST to determine quantity of endotoxin.

Applications

ELISA, Western blotting

Note

This product is intended for research use only.

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