BioVendor - Laboratorní medicína a.s.
Karásek 1767/1
621 00 Brno-Řečkovice a Mokrá Hora

Date of issue: 05.06.2020

PRODUCT DATASHEET

Hepatitis B Virus Protein X Hepatitis B virus E. coli

Cat. No.: RD972038100-B
Type: Recombinant protein
Size: 0.1 mg
Source: E. coli
Species: Hepatitis B virus

Description
Total 165 AA. MW: 17.8 kDa (calculated). UniProtKB acc.no. P12936 (Ala2-Ala154). N-terminal His-tag (12 extra AA). Protein identity confirmed by LC-MS/MS.

Other names
HBx

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 hepatocarcino-genesis. 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 Ca²⁺. 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 phosphatidyli-nositol 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
Animal studies, Others

Amino Acid sequence
MRGSHHHHHH GSAARVCCQL DPARDVLCLR PVGAESRGRP VSGPFGTLPS PSSSAVPADH GAHLSLRGLP VCAFSSAGPC ALRFTSARRM ETTVNAHQVL PKVLHKRTLG LSAMSTTDLE AYFKDCLFKD WEELGEEIRL KVFVLGGCRH KLVCSPAPCN FFTSA

Purity
Purity as determined by densitometric image analysis: >90%

Endotoxin
< 0.1 EU/µg

Formulation:
Filtered (0.4 µm) and lyophilized from 0.5 mg/ml solution in 50 mM acetate buffer, pH=4.0 + 5% (w/v) trehalose

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Reconstituion:
Add 0.1 M acetate buffer pH 4.0 to prepare a working stock solution of approximately 0.5 mg/ml and let the lyophilized pellet dissolve completely.

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

Storage, Stability/Shelf Life
Store 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.

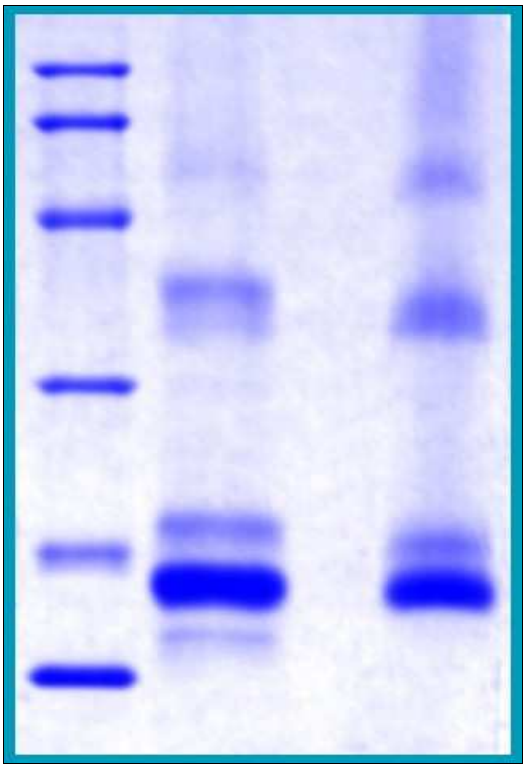
Quality control
BCA to determine quantity of the protein.

SDS PAGE to determine purity of the protein.

LAL to determine quantity of endotoxin.

Applications
ELISA, Western blotting

Note
This product is intended for research use only.



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

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