# Envelope Glycoprotein E1 Protein, HCV (HEK293, His)

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| **Cat. No.:** | HY-P74899 |
| **Synonyms:** | HCV-E1 Protein; Hepatitis C virus Envelope Glycoprotein E1 / HCV-E1 (subtype 1b, strain HC-J4) Protein |
| **Species:** | Virus |
| **Source:** | HEK293 |
| **Accession:** | AAC15725 (Y192-I340) |
| **Gene ID:** | / |
| **Molecular Weight:** | Approximately 18.7 kDa |

## PROPERTIES

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| **Appearance** | Lyophilized powder. |
| **Formulation** | Lyophilized from a 0.2 μm filtered solution of PBS, pH 7.4. Normally 5 % - 8 % trehalose, mannitol and 0.01% Tween 80 are added as protectants before lyophilization. |
| **Endotoxin Level** | <1 EU/μg, determined by LAL method. |
| **Reconsititution** | It is not recommended to reconstitute to a concentration less than 100 μg/mL in $ddH_2O$. |
| **Storage & Stability** | Stored at -20°C for 2 years. After reconstitution, it is stable at 4°C for 1 week or -20°C for longer (with carrier protein). It is recommended to freeze aliquots at -20°C or -80°C for extended storage. |
| **Shipping** | Room temperature in continental US; may vary elsewhere. |

## DESCRIPTION

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| **Background** | Envelope Glycoprotein E1, one of two subunits of the envelope glycoprotein found in the hepatitis C virus, is a type 1 transmembrane protein with a highly glycosylated N-terminal ectodomain and a C-terminal hydrophobic anchor. Envelope Glycoprotein E1 associates with envelope glycoprotein E2 as a noncovalent heterodimer, which mediates virus attachment to the host cell, virion internalization through clathrin-dependent endocytosis and fusion with host membrane. Envelope Glycoprotein E1 helps the virus attach to the membrane of the targeted cell. In other envelope virus Envelope Glycoprotein E1 has a similar role in helping the virus get into the cell. E1/E2 heterodimer is essential for HCV entry. E1/E2 heterodimer binds host apolipoproteins such as APOB and APOE thereby forming a lipo-viro-particle (LVP). Furthermore, association of APOE with LVP allows the initial virus attachment to cell surface receptors such as the heparan sulfate proteoglycans (HSPGs), syndecan-1 (SDC1), syndecan-1 (SDC2), the low-density lipoprotein receptor (LDLR) and scavenger receptor class B type I (SCARB1). And E1/E2 heterodimer binds to CD81 and activates the epithelial growth factor receptor (EGFR) signaling pathway[1][2][3][4]. |

**Caution: Product has not been fully validated for medical applications. For research use only.**

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