

envelope glycoprotein gp120 Protein, HIV-1 (AAC31819, HEK293, His)

Cat. No.:	HY-P76390
Synonyms:	Human immunodeficiency virus 1 (HIV-1) (group M, subtype B, Isolate MN) gp120 Protein (His)
Species:	Virus
Source:	HEK293
Accession:	AAC31819.1 (T30-R513)
Gene ID:	/
Molecular Weight:	95-130 kDa

PROPERTIES

AA Sequence	<pre> TEKLWVTVYY GVPVWKEATT TLF CASDAKA YDTEAHNVWA THACVPTDPN PQEVELVNV ENFNMWKNNM VEQMHEDIIS LWDQSLKPCV KLTPLCVTLN CTDLRNTTNT NNSTDNNNSN SEGTIKGGEM KNC SFNITTS IGDKVQKEYA LLYKLDIESI DNDSTS YRLI SCNTSVITQA CPKISFEPI IHYCAPAGFA ILKCNDKKFS GKG SCKNVST VQCTHGIRPV VSTQLLLNGS LAE E EVVIRS EDFTDNAKTI IVHLKESVQI NCTRPNYNKR KR IHIGPGRA FYTTKNIKGT IRQAHCII SR AKWNDTLRQI VSKLKEQFKN KTI VFNPS SG GDPEIVMHSF NCGGEFFYCN TSP LFNSTWN GNNTWNNTTG SNNNITLQCK IKQI INMWQK VGKAMYAPPI EGQIRCSSNI TGLLLTRDGG IDTDNDTEI FRPGGGDMRD NWRSELYKYK VVTIEPLGVA PTKAKRRVVQ REKR </pre>
Biological Activity	Data is not available.
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.
Reconstitution	It is not recommended to reconstitute to a concentration less than 100 µg/mL in ddH ₂ O.
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

Background

Envelope glycoprotein gp160 undergoes oligomerization predominantly into trimers in the host endoplasmic reticulum, followed by transit to the host Golgi for glycosylation completion. Subsequently, gp160 is proteolytically cleaved in the trans-Golgi by cellular furin or furin-like proteases, resulting in the activation and generation of gp120 and gp41. Surface protein gp120 serves as a critical mediator in the viral life cycle, initially attaching the virus to host lymphoid cells through binding to the primary receptor CD4. This interaction induces a structural rearrangement, creating a high-affinity binding site for chemokine coreceptors such as CXCR4 and/or CCR5. Additionally, gp120 acts as a ligand for CD209/DC-SIGN on dendritic cells (DCs) and CLEC4M/DC-SIGNR on endothelial cells, facilitating viral capture at mucosal surfaces and subsequent transmission to permissive cells. This interaction with DCs allows HIV to exploit the migration properties of dendritic cells, gaining access to CD4+ T-cells in lymph nodes. Virus transmission to T-cells can occur in trans (viral capture and transmission) or in cis (following productive DCs infection), contributing to a robust infection. In trans infection, virions bound to DCs remain infectious over days, possibly protected in non-lysosomal acidic organelles within DCs, enhancing viral infectious potential during migration from the periphery to lymphoid tissues. Upon arrival at lymphoid tissues, intact virions recycle back to the DCs' cell surface, facilitating virus transmission to CD4+ T-cells.

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

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