Recombinant HIV1 GP120 Protein, His-tagged

Cat. No. HUM-398 **Lot. No.** (See product label)

SPECIFICATION

Product Overview	This recombinant HIV gp120 protein is derived from the CM244 strain of subtype E. The protein expressed is HIV-1 Thr 36-Lys 511 (Accession # Q4QX31) is fused with a polyhistidine tag at the C-terminus, and has a calculated MW of 54.1 kDa. The protein migrates at 65-110 kDa in reducing SDS-PAGE due to glycosylation. GP120 from strain CM244 was used in the AIDSVAX vaccine, originally developed at Genentech.
Tag	His
Background	Human Immunodeficiency Virus (HIV) exists in two distinct types, HIV type 1 (HIV-1) and HIV type 2 (HIV-2). The predominant virus worldwide is HIV-1, whilst HIV-2 is geographically restricted to West Africa, and is less infectious and causes slower disease progression. HIV-1 viruses may be further divided into groups, being M, N, O and P. The HIV-1 group M viruses predominate and are responsible for the AIDS pandemic. Within the M group of HIV-1 there are a number of genetically distinct sub-types (also known as clades). Different subtypes can also combine genetic material to form a hybrid virus or "circulating recombinant form (CRF)". Subtype B is the most common in the Americas and Western Europe, whilst subtype C is the predominant form in Africa and India. Most research has been carried out into subtype B, although it accounts for only around 12% of infections worldwide. HIV GP120 protein (or gp120) is the name of the glycoprotein which forms the spikes sticking out of a HIV virus particle. HIV gp120 protein is essential for virus entry into cells as it plays a vital role in seeking out specific cell surface receptors for entry. Three gp120s, bound as heterodimers to a transmembrane glycoprotein, gp41, are

Tel: 1-631-559-9269 1-516-512-3133
Email: info@creative-biomart.com Fax: 1-631-938-8127
45-1 Ramsey Road, Shirley, NY 11967, USA

	thought to combine in a trimer to form the envelope spike, which is involved in virus-cell attachment. Approximately 50% of the mass of HIV gp120 protein is due to glycosylation, the high level of which may prevent gp120 from being recognised by the human immune response. gp120 binds to the human cell surface antigen CD4, which is primarily expressed by Helper T lymphocytes and monocytes/macrophages.
Purity	>90% by SDS-PAGE
Formulation	PBS, pH7.4.
Stability	Stability before reconstitution: At ambient temperature: 1 month At +4 centigrade: 12 months At <-20 centigrade: 24 months Stability after reconstitution: At -80 centigrade: 3 months
Freezing	Can be frozen, but avoid multiple freeze/thaw cycles.
Storage	Store lyophilised product at 4 centigrade for short term, or frozen at -20 centigrade - -80 centigrade for long term. Product is shipped at ambient temperature
Concentration	Dependent upon reconstitution volume.
Notes	This product is intended for research and manufacturing uses only. It is not a diagnostic device. The user assumes all responsibility for care, custody and control of the material, including its disposal, in accordance with all regulations.
Type	Recombinant

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ClassID 1	Infectious Disease

GENE INFORMATION

Synonyms	HIV GP120 [HIV-1/Clade E (CM244)]

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